RIGA GRADUATE SCHOOL OF LAW

Suitability of Trade Secrets Directive for the protection of patentable information from perspective of a startup company

MASTER'S THESIS

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DECLARATION OF HONOUR:

I declare that this thesis is my own work, and that all references to, or quotations from, the work of others are fully and correctly cited.

(Signed) …….

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Contents

SUMMARY

This research paper studies suitability of newly adopted European Parliament and the Council adopted a Directive no. 2016/943 "*on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure*" (hereinafter – Trade Secrets Directive) for protection of potentially patentable information from a startup company viewpoint. The goal of this paper is to assess what are those advantages which could encourage startup companies to use trade secrets as an alternative for patents in their information protection strategy as well as those imperfections which could the opposite – force to abstain from using trade secrets.

Background of the study provides introduction to definition of startup as well as legal framework of startup company within EU. It also describes why startup companies are so fragile and ad the same time valuable. Likewise various EU policy measures which are aimed to contribute competitiveness in the internal market and the development of the EU economy through various financial support programs are viewed. Not forgetting the goal of this Paper, bacground of the study also provides insight into legal and institutional framework within EU as well as legal framework of trade secrets protection within EU. These are important tools for potentially patentable information protection. However there are significant divergences between these both tools, which should be considered when determining most apporopriate legal strategy for protection of potentially patentable protection.

Afterwards second chapter provides various financial, legal and administrative aspects which startup companies have to take into account when choosing most appropriate way how to protect senstive commercial information that they holds. It is emphasized that legal strategy is one of the most important isssues which startup companies has to settle. If inappropriate strategy has been chosen, risks that information might be obtained by competitors increases significantly since startup companies, despite the extreme uncertainty, are highly attractive due to the fact that their potenital proft is considered as high.

Finnaly, third chapter provides anaylsis of possible advantages and disadvantages of Trade Secrets Directive for protection of potetially patentable information which startup company helds. Paper does not analyze provisions sequently. It is rather highlighting those rules of Trade Secrets Directive which a startup company could consider as advantageable. That said, rules which could contritubute using trade secrets for protection of their potentially patentable information in the future development. The author concluded that there are four main advantages that could enhance startup company protection in the future and cotribute

their protection. These advantages are the following: a) unitary regaulatory framework within EU; b) harmonized definition which outlines minimum requirements which should be fulfilled in order to clasify and protect information as a trade secret; c) Determination of conditions when information is unlawfully acquired, used or disclosed thus determining when startup company might seek for damages; d) Remedies and damages which company is able to seek for, thus preventing acquiring, using or disclosing secret information unlawfully.

However, third chapter also discusses other Trade Secret Directive provisions which from startup company are less compatible for their secret protection. It is important to clarify, that these potential imperfections are rather assessd form economical and business perspective, not touching or questioning technical matters or fundamental rights other, e.g. freedom of speech or freedom of work. In authors opinion these disadvantages are the following: a) reverse engineering as a legal way how to obtain initially secret information; b) trade secret acquisition, use or disclosure under the guise of employee protection; c) trade secret acquisition, use or disclosure under the guise of freedom of speech.

INTRODUCTION

Due to the growing global consumer demand in all sectors, the modern business world is increasingly seeking new ideas and technologies in order to satisfy market demand for goods and services for most competitive price. Thereby manufacturers, investors and other market players are spending suffiecient funds to research and develop new products and technologies themselves as well investing in potential profitable startup products. Startup companies financial capability to explore, develop and market the product usually is limited and attraction of potential investors is significant precondition. During the research and development process, it is also important for the particular startup company to develop a strategy for determining the most appropriate and effective way how to protect valuable information against industrial espionage or other unwanted information disclosure to the third parties which might negatively affect or even destroy business of the particular startup.

Patents and Trade Secrets are those legal tools which are used in order to protect novel and industrial products. Which one of these is most preferable, depends on the strategy which particular startup company has chosen to protect its potentially patentable information. If patent regulatory framework within Europe is harmonized under European Patent Convention and several international agreements, until the year 2016 there was no uniform trade secret regulatory framework. However, in 2016 the European Parliament and the Council adopted a Directive no. 2016/943 "*on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure*" (hereinafter – Trade Secrets Directive) that aims to standardise the national laws in EU countries against the unlawful acquisition, disclosure and use of trade secrets. The Trade Secrets Directive harmonises the definition of trade secrets in accordance with existing internationally binding standards.[1] EU authorites underpined various problematic assumptions for the justifications for harmonization. Firstly there is a high risk of trade secret misappropriation. Secondly, significantly more investment will go into innovation (with fewer resources being wasted on applying costly measures to protect trade secrets). Thirdly, significantly more cross border, collaborative research will occur. Finally, legal certainty and a coherent EU framework for trade secret protection will ensue.[2]

Taking above mentioned into account, aim of this master thesis is to analyze what are the advantages of this harmonized Trade Secrets Directive as well as potential risks and

[1] Trade Secrets. European Commission official home page, Available on: http://ec.europa.eu/growth/industry/intellectual-property/trade-secrets_en, acessed 12.03.2018

[2] Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, p. 5

shrotcomings which Startup companies should bear in mind when developing their protection strategy of their potentially patentable information. Accordingly in this thesis research should be answered the following questions:

1) What are advantages of the Trade Secrets Directive that could encourage Startup companies to use trade secret as an alternative strategic legal tool of protection of potentially patentable information?
2) What are the possible shortcomings of the Trade Secrets Directive that could deter Startup companies from using trade secrets as an alternative to protect potentially patentable information?
3) How will the Trade Secrets Directive affect the strategy of startu company for protection of their potentially patentable information?

In order to find an answers to the research questions, this paper is divided into three parts. First part provides insight into what is startup and what is its contribution to EU economy and improvement of competitiveness within internal market. In first part also patents and trade secrets as an most suitable legal tools for potentially patentable information protection are described. Meanwhile second part provides various circumstances which startup companies should take into account when choosing most appropriate strategy for protection of their potenitally patentable information protection. Finally third part of this paper provides analysis of the provisions stipulated in the Trade Secrets Directive which could spur to use trade secrets as an appropriate legal tool for protection of secret information or on the contrary – deter from using it.

In order to find answers to resesarch questions various methodes were used. Firsty, historical approach is excercised through analysis of actual situation within EU until the Trade Secrets Directive was adopted as well as internation legal instruments which has regulated trades secrets protection so far. Aslo different court opinions were analyzed. Secondly, the comparative methodology is applied when assessing different regulation of trade secrets protection between EU Member States and common law countries, in particular US and UK. Finally, the grammatical method is used mostly by analysing content and essence of newly adopted Trade Secrets Directive.

BACKGROUND OF THE STUDY

Startups

The following section provides insight in what might be possible definition of startups and its legal statuss within EU. Also economical data related to the startup development within EU will be provided. Taking into account that EU authorities has acknowledged significance of impact of the stratups on EU economy, EU policy and supportive instruments how EU has intended to contribute startup company development on EU level is described. Afterwards author provides description of patents and trade secrets as two most often used legal tools for protection of potentially patentable information from legal point of view.

Definition of the startups and legal framework of startups within EU

Most likely it will be hardly to find some one within business world who has never heard anything about startups. Even this trend has become very popular, the first impression is that startups are companies or groups who has innovated some business ideas but they need help to boost this project. Accordingly the question arises what makes startups so special comparing to other type of enterpreneurships and why investors and governmental authorities are willing to provide neccessary support to them?

Startup as a trend has been know for years but it is hard to determine what exactly is startup and its legal platform, of course, if there is such. Thus some considers startups as a company which is working to solve a particular problem within the area where solution is not obvious and success is not guaranteed.[3] Eric Ries, one of co-founders of several startup projects in US silicon valley alleged that "startups is human institution designed to create a new product or service under conditions od extreme uncertainty."[4] Meanwhile another well known startup enterpreneur from silicon valley, Steve Blank emphasizes that "startup is temporary organisation designed to search for a repeatable and scalable business model."[5] And in fact author agree with both of them. Firstly, especially in research and development stage (hereinafter – R&D) there is no indications whether project will succeed or not. However, if it does, it starts generate income for the company and its investors as it is revealed in figure 1.

[3] Natalie Robehmed, What is startup? 2013, Available on: https://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/#513a69924044, accessed: 15.04.2018

[4] Eric Ries, A Lean Startup. How today's enterpreneurs use continuos innovation to create radically successful businesses, 2011, Crown Business, New York, p. 36

[5] Steve Blank, Why the lean startup changes everything,, 2013 may issue of Harward Bussines review, Available on: https://hbr.org/2013/05/why-the-lean-start-up-changes-everything accessed, 15.04.2018

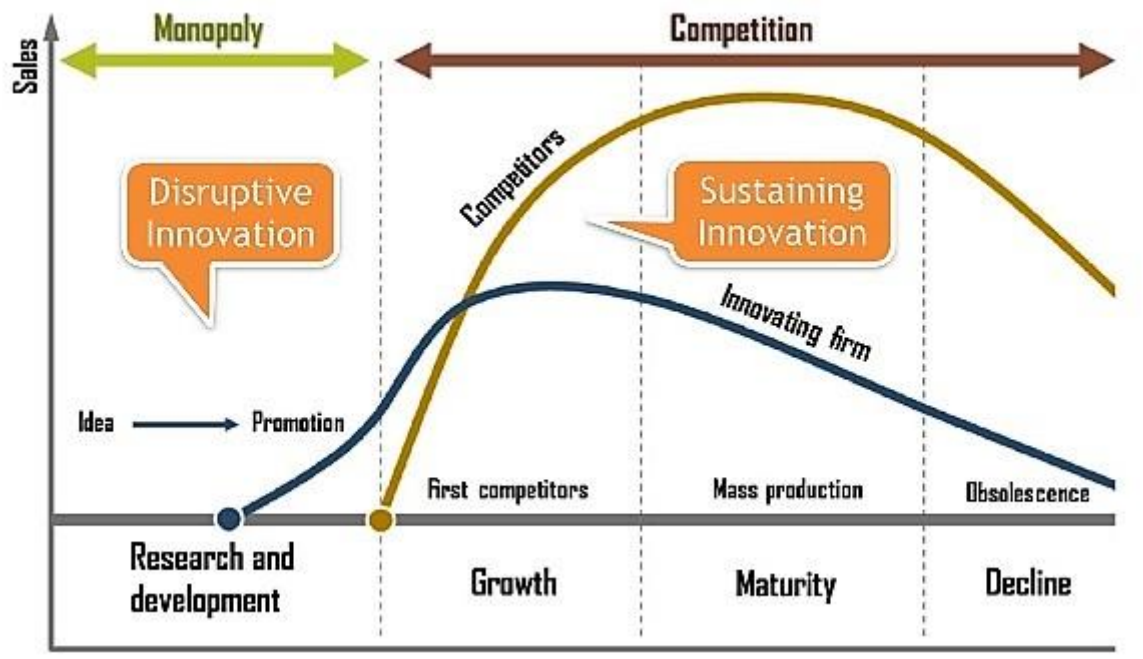

Figure 1: different development stages of the startup company (source: slideshare.net)

Another difference between startups and already running companies which Steves Blank highlights is the following: "If the first one already have or at least they are expected to have executive business model, latter are just look for one."[6] Startup definitions also says nothing about size of the company, the industry, or the sector of the economy.[7] Thus, "the main difference between startups and large and small businesses is that these companies are clones of already existing business with clear business model, pricing, target customer and their product migh be already attractive for investment. Accordingly the difference between "extreme uncertainty" is the fact that success or failure of these businesses depends on execution."[8] In other words it could be said that startups are something novel and innovative. Therefore it does not have clear target market or predictable future revenue. Actually that is the main reason why investors are ready to take that risk and invest in particular project. Indeed, in "ordinary" businesses, founders of the companies, e.g. shops, bakery etc. prior to establish business can rely on information they can obtain and provide market reasearch, prepared business plan etc. with higher accuarcy and predictability. Accordingly, the only possible uncretainty is whether execution of the company will fullfill anticipated expectations. Meanwhile target markets of the potential startups is less known and

[6] Steve Blank, Why the lean startup changes everything,, 2013 may issue of Harward Bussines review, Available on: https://hbr.org/2013/05/why-the-lean-start-up-changes-everything accessed, 15.04.2018
[7] Eric Ries, A Lean Startup. How today's enterpreneurs use continuos innovation to create radically successful businesses, 2011, Crown Business, New York, p. 36
[8] Ibid, p. 39

predictable, thus, potential risk of failure increases. However level of risks should not be the decisive factor to assess whether company is startup or not.

European Startup monitor in its yearly report among other things also argues that startups "differentiates from conventional businesses that do not promote innovative products/services or business models and that exist primarily to secure the livelihood of the founders without any substantial growth perspective. Further they explains that startups are defined by three characteristics: 1. Startups are younger than 10 years 2. Startups feature (highly) innovative technologies and/or business models 3. Startups have (strive for) signifcant employee and/or sales growth."[9]

Considering legal form of startup should be noted that actually there is no such seperate legal entity form for startups. Startup company as an form of enterpreneurship falls under the scope of already existing legal forms, for instance, private limited company or joint stock venture. From a company law perspective, within EU startups are Small and Medium Enterprise (hereinafter – SMES). SMEs are considered to be any entity engaged in an economic activity. In fact this also includes self-employed persons and family businesses engaged in craft or other activities, and partnerships or associations regularly engaged in an economic activity. Within the SME category, a small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million. Meanwhile the SME category, a microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million.[10]

However, there are certain exceptions – EU member states which has established seperate legal definition for startups. In the year 2016 House of Parliament of Latvia adopted new Law on Aid for the activities of Startup companies. The purpose of adopting this law was to promote establishment of start-up companies in Latvia, thus promoting research as well as use of innovative ideas, products or processes in the economic activity (commercialisation of research products). Latvia has been one of the rare countries within EU who has determined what exactly is „ startup" definition and provided legal framework for that definition that has been expressed in the following wording: „start-up company is a capital company with a high growth potential the basic activity of which is related to the

[9] Tobias Kollmann, Christoph Stöckmann, Simon Hensellek, Julia Kensbock, European startup monitor 2016, European Startup monitor, p. 14

[10] Commission recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (notified under document number C(2003) 1422) (Text with EEA relevance) (2003/361/EC), 2003, OJEU, L 124/36

development, production or improvement of scalable business models and innovative products"[11] In fact this definition and law as such is more related to the state aid rather than to type of legal establishment, since in Latvia startups still remain as an legal entities which provides "commercial activity performed by merchants in their name for the purposes of gaining a profit."[12]

There might be and most likley also are objections against such a inequality regarding state support. But the main difference in here is that if startups are lucky, the profit they gain is significantly higher than conventional business. And startups has substantial present and future impact on the economy of EU as well. Therefore needles to say that also EU authorities recognizes this significance of the startups by establishing various financial and legal tools how to protect and support SMEs (including) startups, considering their role in the future development of the EU economy.

EU contribution policy on the development of the startups

It should be noted that "raising finance has never been easy and startups typically have to rely on their own savings, personal loans or money from the friends, family and fools to get started. The perception of startups as carrying high levels of risk has meant that banks have always demanded high rates of interest on loans, and in reality any start-up that really is a high risk is unlikely to achieve bank funding at all. The main alternative to banks has always been private investors who tend to be more focused on long-term capital growth of their investments rather than income from annual interest and safe regular repayments of capital."[13] However, that is not allways possible. "Startup companies are newly born companies which struggle for existence. These entities are mostly formed based on brilliant ideas and grow to succeed. Unfortunately many startups fail in the very early stages and less than one third of them turn into so called "high rate of failure"companies. This failure occurs due to several reasons, such as lack of finance, team management problems, lack of enough business knowledge, technology etc."[14]

[11] Law on aid for the activities of start-up companies, Latvian law, adopted on 23.01.2016, in force on 01.01.2017, Published: Latvijas Vēstnesis 241 (5183), 10.12.2016

[12] Komerclikums (The Commercial law of Latvia), Adopted in 13.04.2000, published: "Latvijas Vēstnesis", 158/160 (2069/2071)

[13] David F. Butler, Business planning for new venture. A guide for start-ups and new innovations, 2014, Routledge, New York, p. 9

[14] Aidin Salamzadeh, Hiroko Kawamorita Kesim, Startup Companies: Life Cycle and Challenges, 2015, 4th International Conference on Employment, Education and Entrepreneurship (EEE), Belgrade, Serbia, 2015, Available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2628861, accessed, 15.04.2018

According to the EU authorities, SMEs represents 99% of the all businesses.[15] Therefore in order to boost competetive advantage comparing to companies outside of the EU, authorities decided to provide long term financial support for the SMEs in order to contribute economical growth through innovations and development.

In order to reach that goal EU policy makers decided to estabilsh various financial instruments. By doing that, the objective was to "support around 257 SMEs from 31 countries who aim to get their innovations faster to the market. The funding of more than 12 million euros in total was coming from Horizon 2020, the EU research and innovation programme. Companies were able to apply for support under the SME Instrument depending on the maturity of their innovation."[16] The SME instrument is part of the European Innovation Council pilot (EIC pilot) which was established as part of the Horizon 2020 Work programme 2018-2020, when the SME Instrument, was brought under the EIC pilot umbrella, to provide a 'one stop shop' for funding of innovators/innovations in the EU. The aim of the Horizon 2020 is to fund high-potential innovation developed by SMEs through the SME instrument. The SME instrument offers Europe's brightest and boldest entrepreneurs the chance to step forward and request funding for breakthrough ideas with the potential to create entirely new markets or revolutionise existing ones. The plan was that over the period 2018-2020, the SME Instrument will support groundbreaking innovative ideas for products, services or processes that are ready to conquer global markets. Available to SMEs only, the new scheme offers phased, progressive and complementary support to the development of out-of-the-box ideas. There were no predefined topics for the SME instrument call, but only the most excellent and impactful ideas will receive support. In the last three years of implementation, around 4000 SMEs will be selected to receive funding under the SME instrument call.[17]

At this stage it is hard assess whether and how these EU efforts to support inventive projects will result on figures and graphs. However, this is usefull and supportive actions how to contribute breakdown less attractive startups which perhaps are out of funds to finish their R&D process and approach investors afterwards.

[15] What is an SME? EU Commission official home page, Available on: http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_lv, accessed on 04.05.2018.

[16] European Innovation Council pilot, EU commission official home page, Available on: https://ec.europa.eu/info/news/european-innovation-council-pilot-support-257-smes-eu13-million-2018-apr-05_en, accessed 05.05.2018.

[17] SME Instrument, European Commission official home page, Available on: http://ec.europa.eu/programmes/horizon2020/en/h2020-section/sme-instrument, accessed 04.05.2018

Startups are SMEs with innovative products and ideas but it also bears extreme uncertainty and high risks for potential investor. Even if investors are often aware of the risks they are bearing, they also want to see product where they are investing. For some startups financial capability is not enough to finalize their R&D process, therefore they are less attractive for investors. Accordingly, taking into account that SMEs has significant impact on economoy of EU, decision of EU authorities to provide long term fiancial support for innovative ideas is highly apprectiated. However, financial aspects are not the only considerations that startup company must keep in mind. Good and innovative idea is not only attractive for investors but also for unfair competitors as well. Therefore it is important to provide appropriate legal protection for their product.

Leegal and institutional framework of Patent protection in Europe

Alongside with financial support, of course, there is also essentially to have legal instruments for protection of startup products. Otherwise the lack of arranged legal order could cause risks related to the startup developmet as such. As one of the most important and most often used legal tool for protection of innovations is patent. "Patent is a document, issued, upon application, by a government office, which describes an invention and creates a legal situation in which the patented invention can normally only be exploited (manufactured, used, sold, imported) with the authorization of the owner of the patent. "Invention" means a solution to a specific problem in the field of technology. An invention may relate to a product or a process. The protection conferred by the patent is limited in time (generally 20 years). Patents are frequently referred to as "monopolies", but a patent does not give the right to the inventor or the owner of a patented invention to make, use or sell anything. The effects of the grant of a patent are that the patented invention may not be exploited in the country by persons other than the owner of the patent unless the owner agrees to such exploitation. It should be emphasized, however, that while the State may grant patent rights, it does not automatically enforce them, and it is up to the owner of a patent to bring an action, usually under civil law, for any infringement of his patent rights. The patentee must therefore be his own "policeman." Simply put, a patent is the right granted by the State to an inventor to exclude others from commercially exploiting the invention for a limited period, in return for the disclosure of the invention, so that others may gain the benefit of the invention. The disclosure of the invention is thus an important consideration in any patent granting procedure."[18]

[18] WIPO Intellectual property handbook, WIPO publication no. 489 (E), Second edition, 2004, Available on: http://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf, accessed 06.03.2018

Regarding definition and scope of the patent on international level it is covered under two worldwide international treaties: Paris Convention for the protection of industrial property (hereinafter – Paris Convention) and Trade-related aspects of intellectual propery rights (hereinafter – TRIPS). Paris Convetion which was adopted in 1883[19] provides the substantive provisions in the widest sense and these substantive provisiosn fall into three main categories: national treatment, right of priority and common rules.[20] Meanwhile TRIPS agreement which is internal part of so called Marrakesh Agreement, was signed in 1994 and is binding to all 162 members of the World Trade Organization (hereinafter – WTO). Thus Article 27 imposes member states "to provide that patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application."[21] Also Convention on the Grant of European Patents (hereinafter - European Patent Convention) as an regional Europena legal tool provides simular requirements for patentability defining that "European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application."[22] All these international agreements provides clear and transparent requirements which need to be fulfilled to apply for patent protection. Therefore it is substantial to have appropriate patent application, since the whole process as such is relatively costly and time consuming.

Basically patents are governed by national law and enforcable only in the country or region where patent is registered. Naturally in today's dynamic global market economy where technological opportunities have deleted any boundaries for the world wide business transactions, apparently patent protection only on national level is far to be sufficient. The main risk is the fact that what is protected in one coutry could be not protected in another, thus preventing transborder business transactions. Needless to emphasize that for startup companies interconnectivity is one of the main requirements to attract investors. However, there is no unitary patent regulation within EU. Therefore need for transborder patent

[19] Paris Convention for the protection of Industrial property, International treaty, 1883, Available on: http://www.wipo.int/treaties/en/text.jsp?file_id=288514, accessed on 23.04.2018

[20] Summary of the Paris Convention for the protection of Industrial Property (1883), WIPO official website, Available on: http://www.wipo.int/treaties/en/ip/paris/summary_paris.html, accessed 23.03.2018

[21] Trade-Related Aspects of Intellectual Property rights (TRIPS), The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994, Available on: https://www.wto.org/english/docs_e/legal_e/27-trips_01_e.htm, accessed: 23.04.2018

[22] Convention on the Grant of European Patents (European Patent Convention), European Patent Office, 2016, Available on: http://documents.epo.org/projects/babylon/eponet.nsf/0/029F2DA107DD667FC125825F005311DA/$File/EPC_16th_edition_2016_en.pdf, accessed 05.05.2018

protection is even more actual since this is essential for mayority of inventors and companies creating more and more inventions.

In order to provide "intergovernmental cooperation in patent-granting procedures in Europe, European Patent Office was established under the scope of Europen Patent Convention. The main cosideraton of establishing European Patent office was to avoid duplication of the work of Patent Offices as regards the search and examination of patent applications and the grant of patents. Under the system of intergovernmental cooperation introduced by the European Patent Convention, it is possible to file a single patent application, in one of the three official languages (English, French and German), and thereby obtain a European patent with effect in one, several or all of the Contracting States. Prior to the entry into force of the Convention, it was necessary, where protection of an invention was desired in a number of countries within the region, to file separate applications in each of those countries."[23] Since these boundaries are erased, inventor may apply for patent granting not only in his home state but also almoust in all Europe, thus avoiding of applying for patent grant in each country seperately.

If startup inventor has decided to apply for wider protection which is beyond the scope of European Patent Office startup compay shall apply applications for the protection of inventions in any of the Contracting states of the Patent Cooperation Treaty World Intellectual Property Organisation (hereinafter – WIPO).[24] This Treaty makes it possible to seek patent protection for an invention simultaneously in each of a large number of countries by filling an "international" patent application.[25]

In conclusion summing up above mentioned it should be emphasized that one of the main advantage in a favour of patens is clear determineation of the scope of the protection. Another advantage should be mentioned organizationl considerations since WIPO and European Patent Office are main international institutions which in conjunctions with national patent offices provided transparent and clear procedure how to provide protection of innovative produc not only on national level but also on international level as well.

Legal framework of trade secrets protection in Europe

Another, more broad legal tool for potentially patentable information protection are trade secrets. "As the name suggests, trade secrets are valuable information kept secret. In fact

[23] WIPO Intellectual property handbook, WIPO publication no. 489 (E), Second edition, 2004, Available on: http://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf, accessed 06.03.2018

[24] Patent Cooperation Treaty, International treaty, Washington, 1970, Available on: http://www.wipo.int/pct/en/texts/articles/atoc.html, accessed 03.05.2018

[25] Summary of the Patent Cooperation Treaty (PCT), WIPO official webpage, Available on: http://www.wipo.int/treaties/en/registration/pct/summary_pct.html, accessed 02.05.2018

trade secrets are the only way that you can "own" unpatented concepts and ideas. Trade secret can be any kind of information, technical or non-technical. There is no requirements that trade secrets be written."[26] Most simply, "a trade secret is information that you do not want the competition to know about."[27] "In fact the birth of every patent starts out as a trade secret. At the time of conception, the idea or information can only be protected by keeping it secret."[28] "Trade secrets are confidential and undisclosed business information that provides the owner with a competitive advantage. Virtually all types of information can be protected as a trade secret as long as reasonable and accepted measures are taken within the confines of the law."[29]

Trade secrets is relatively new concept which has been and still very often protected as a subject of unfair competition. As Arthur Schiller explained, "the law of unfair competition, that heterogeneous concept of modern law, is relatively recent in origin. It is only the last couple centuries that has seen any great development of legal principles regarding simulation of goods and communication of trade secrets that now play such an important factor in legal and business life."[30] "Trade secrets law differs considerably from coutry to country, as civilian jurisdictions rely on unfair competition torts or statutes, whereas common law countries adopt an equitable or misappropriation method."[31] Until year 2016 when European Parliament and the Council Directive adopted Directive no. 2016/943 "on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure" (hereinafter – Trade Secrets Directive or – the Directive), there was lack of uniform trade secret regulatory framework within EU. With couple exceptions almost in none of the Member states had particular regulation for trade secrets.[32] On international level trade secrets protection was basically regulated only by two legal instruments - Paris Convention and TRIPS agreement. Paris Convention does not rules trade secret protection directly. Instead it comes out from the Article 10 bis which is imposing

[26]Securing Intellectual property. Protecting trade secrets and other information assets, 2009, Butterworth-Heineman, p. 8

[27] James Pooley, Trade Secrets. The other IP rights, WIPO Magazine, June 2013, Available on: http://www.wipo.int/wipo_magazine/en/2013/03/article_0001.html, accessed 24.04.2018

[28] Michael Szycher, Commercialization Secrets for Scientists and Engineers, 2016, first edition, CRC Press, Available on: Taylor&Francis.com, p. 235

[29] Ibid, p. 243

[30] A. Arthur Schiller, Trade Secrets and the Roman Law, The Actio Servi Corrupti, 1930, 30 Colum. L. Rev., p. 837 - 845

[31] William Van Caenegam, Trade secrets and intellectual property. Breach of Confidence, Misappropriation and Unfair Competition,2014, Kluwer Law international, p. 194

[32] Directive 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, Text with EEA relevance, OJEU L 157/1, 15.06.2016, Available on: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 23.04.2018

countries of the union to assure effective protection against unfair competition.[33] Meanwhile TRIPS agreement, particulary Article 39 provides protection of undisclosed information.[34] Until the year 2016, when Trade Secrets Directive was adopted, TRIPS agreement was generally the main international legal tool, which governed trade secret protection and was binding to all signing parties, including EU member states. Unfortunately, application of this agreement was not strictly determined thus giving the Member states cosiderable freedom it caused fragmentation and differences approach of protection of trade secrets. In fact definition of the trade secrets determined in the Trade Secrets Directive was taken over from TRIPS agreement, thus EU authorities avoided from creativity. Assumably that could be interpreted not only as understandable sequential implementation of binding agreements but also as precaution by authorities since unitary trade secret protection within EU is considered as something relatively new.

"While there is scholarship supporting the economic justification for trade secrets law, i.e. protection stimulates investment in innovation and reduces wasted expenditure on private spending on protecting trade secrets, there are also scholars who remain very skeptical of this justification, in particular because there is little empirical evidence to support it."[35] It should be agreed that indeed, there are lot of practical uncertainties and complications in assessing either certain information and either rights on this information has been infringed. However, opposing this sceptical position it should be also noted that trade secret is significant legal tool for those enterpreneurs whoes information fully or to some extent are not patentable either there are other reasonable considerations why particular company is not able (e.g. lack of time, finance and legal support) to patent their product. Therefore existence of particular trade secret law is favorable for SMEs (including startup companies). And this is also knowledged by EU authorities. Thus, as it is explained in Trade Secrets Directive recitals, "trade secrets are specificaly important to SMEs because innovations by SMEs tend to be more incremental in nature and of core significance to firm value and performance. The perceived higher cost of

[33] Paris Convention for the protection of Industrial property, International treaty, 1883, Available on: http://www.wipo.int/treaties/en/text.jsp?file_id=288514, accessed on 23.04.2018

[34] Trade-Related Aspects of Intellectual Property rights (TRIPS), The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994, Available on: https://www.wto.org/english/docs_e/legal_e/27-trips_01_e.htm, accessed: 23.04.2018

[35] Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, p. 7

patent ownership and the material impact that disclosure may have on SME firm's value and performance encourage the use of secrecy as a protection mechanism."[36]

In conclusion of this chapter it should be noted that startup are considered as SMEs which contrary to convetional business models has innovative production and ideas with expectations of high and rapid profit. However, alongside with these expectations comes extreme uncertainty. Therefore expected profit and idea as such must be very attractive for potential investors to encourage undertake high risks of potential failure. Nevertheless, most of startup companies suffers lack of financial support to finalize R&D process and take the product to the market or potential investor. Therefore EU auhorities, being aware of significance of startup companies and also seeking to settle other prolonged EU economy issues, has established various financial supportive measures for highy innovative startup companies in order to cotribute EU economy development and competitiveness within internal market. However in addition to financial support there is also need for appropriate regulation for protection of valuable information. Locally and internationally patents and trade secrets are most appropriate and in fact, the only legal tools for potentially patentable information protection. Nevertheless for that purpose it is also important to determine suitable strategy for potentially patentable information protection, i.e. determine most appropriate legal tool since both these tools has significance divergence.

[36] Study on Trade Secrets and Confidential Business Information in the Internal Market, Final Study, April 2013 Prepared for the European Commission Contract number: MARKT/2011/128/D, Available on: http://ec.europa.eu/DocsRoom/documents/27703, accessed 23.04.2018

ASSESSMENT OF VARIOUS CONDITIONS WHEN CONSIDERING MOST APPROPRIATE STRATEGY FOR PROTECTION OF POTENTIALLY PATENTABLE INFORMATION

As it was described in previous chapter, patents and trade secerts are main legal instruments which startup companies can use in order to protect their potentially patentable information. "For the majority of innovative or technology-based ventures, the protection of their intellectual property is a key aspect of achieving and maintaining a competitive advantage over their competitors."[37] It should be noted that at the early stage of the startup development, financial and administrative capability of new venture might be limited. Also, startup product itself might be still not fully ready and still is in the research phase. Therefore it is significant for the management of the startup company to assess all circumstances and potential risks, thus applying most suitable legal strategy for protection of potentially patentable information protection. The following chapter is divided in 4 sub-chapters and provides analysis of various aspects which startup companies should consider when determening most effective and appropriate legal instruments how to protect potentialy patentable information.

Scope and general considerations

As it comes to the scope and general considerations, it should be explained that "the law of trade secrets is often compared to patent law, since both trade secrets and patents from an important part of any firm's technology portfolio and, in fact, technology protected under trade secret law is often eligible for patent protection. However, it is very important to remember that the legal rights embodied in a patent grant or trade secret are functions of distinctly different public policy considerations."[38] Therefore, for the newly established startup company reasonable question arises – what are these "different public policy considerations"? Which legal tool to choose in order to prevent unlawfull acquisition of the profitable information by competitors? For the large companies this is not an issue since most likely they spend significantly high amount of money to estabilsh and employ proffesional staff whoes task is to work on protection of the companies new innovative products and

[37] David F. Butler, Business planning for new venture. A guide for start-ups and new innovations, 2014, Routledge, New York, p. 230

[38] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 41

determine most effective strategy for the protection of this product. However, startups are not a case. As it was aformentioned, startups does not have such knowledge as well as financial and legal capacity therefore most often legal strategy for information procetion at least at the very early stage of the company development must be assessed by founders of the company.

One of the main differences between patents and trade secrets is that "there is no restriction on the type of subject matter that may be a trade secret. Meanwhile patent is limited to process, machine, manufacture, or composition of matter. Anytime of technology protected as a trade secret may be a device or product that is eligible for patent protection as well."[39] Accordingly, bearing above mentioned in mind, "a startup needs to strongly consider whether to opt for patent protection or trade secret for certain innovations. Contrary to patents which are protected up to 20 years, a trade secret can last indefinitely unless the information is no longer confidential or the information has been discovered by legitimate means (such as reverse engineering)."[40]

Of course, there always will be opinion that 20 years of protection would be too short period of time. Accordingly supporters of such an opinion would suggest startups better to rely on trade secrets. Usually as "one of the most frequently cited commercially succesfull use of trade secret in the protection of the secret recipe of formula for Coca-Cola. Though the Coca-Cola Company might have obtained a patent on its formula 100 years ago, that patent would have long ago expired, and its competitors would have been free to imitiate its formula. By using trade secret protection, the company has maintained a highly profitable advantage over competitors for a very long time."[41] Nevertheless, startup management should keep in mind, that Coca-Cola through decades has maintained strong protection policy and significant amount of money for those purposes has been spent. Also, for those who conisder that startups should rely only on trade secrets, also should remember "that more than 80% of trade secrets are lost not only through employee disclosures but also through contractors."[42] Therefore, from startup company perspective world wide known large companies like Coca-Cola perhaps is not a best example and startup companies should be very cautious by chosing one or another protection strategy.

[39] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 43

[40] Michael Szycher, Commercialization Secrets for Scientists and Engineers, 2016, first edition, CRC Press, Available on: Taylor&Francis.com, p. 244

[41] Frederick Abbott, Thomas Cottier, Francis Gurry, The International Intellectual property system: Commentary and Materials, Part One, Kluwer Law international, Hague, Netherlands, 1999, p. 198

[42] Michael Szycher, Commercialization Secrets for Scientists and Engineers, 2016, first edition, CRC Press, Available on: Taylor&Francis.com, p. 244

"For businesses that rely on patent protection, secrecy is a critical part of the innovation process. Because most national patent laws require "absolute novelty", this means that until the day a patent application is filed, the invention must be completely protected from any public disclosure. Where the technology requires refinement through experimentation outside the laboratory, this can be extremely difficult. That is why discussions regarding international patent law harmonization often include the idea of a "grace period" of up to one year before filing, during which time disclosures by an inventor will not disqualify a later patent application."[43] While novelty is required for patent protection, it is not required for trades secret status. Secrecy in the context of trade secrets thus implies at least minimum novelty since there is argumentation that what is not novel could be also known by others.[44] But that is considered rather from approach by court in case of litigation where trade secret holder must prove that particular information is not known by third parties.

"The decision to select either structured or unstructured forms of protecton depends on variety of factors, including the anticipated life of the advantage that the invention provides over competitors, the costs and risks of maintaining trade secret protection, the difficulty of proving patent infringement, and the anticipated efforts of third parties to replicate the invention."[45] "A company with one or more patents for its tecnology will usually have substantial valuble technical and business information related to but outside the direct coverage or disclosure obligations of, its patents. The company can maintain vigorous efforts in both areas of legal protection. To the extent a patent application is filled, but timely abandoned before insuance or othe publication, trade secret rights are retained – there is no forfeiture or election through the filling of a patent application."[46]

Undoubtedly it is clear that trade secret will be the only and the best legal protectional tool for those startup invetions which are in R&D stage, or either startup product contains nonpatentable improvements or if patent protection is uncertain.[47] Otherwise there are various circumstance which should be kept in mind in order to determine.

[43] James Pooley, Trade Secrets. The other IP rights, WIPO Magazine, June 2013, Available on: http://www.wipo.int/wipo_magazine/en/2013/03/article_0001.html, accessed 24.04.2018
[44] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 43
[45] Ibid, p. 43
[46] Ibid, p. 45
[47] Michael Szycher, Commercialization Secrets for Scientists and Engineers, 2016, first edition, CRC Press, Available on: Taylor&Francis.com, p. 246

Expenditure and administrative aspects

When comparing patents and trade secrets, main factors which usually are compared are costs, administrative issues imposed by respective public authorities as well as lengh of the protection under the each of legal protection models. "First reason why do businesses turn most often to secrecy to maintain their advantage is that it is cheaper than other forms of intellectual property that require registration with a government agency, often with the expense of hiring lawyers or other professionals."[48] Application costs on an national level differs from country to country. However, European patent application has established common fee table and costs should be considered as moderate.[49] Also WIPO fee table for international patent application provides relatively low prices as well as.[50] Actually costs related to the patent registration for potentialy profitable startup company should not be conisidered as high. However, major expenses are related to lawyers and patent attorneys since patent application and claim development as such is quite complicated. Since unprofessional patent application may arise other risks (e.g. rejection, time), this is not a position where inventors or management of the startup may save up.

In contrast, "to establish your trade secret right, all you need to do is be careful with it, spending only what is necessary to keep it from becoming generally known. In addition, much more information can be protected through secrecy than is possible with patents, which can only be granted for truly novel technical innovations. Secrecy covers any information that gives you an advantage, even if someone else is already using it. The only limitation is that it not be generally known. That point reveals the downside of secrecy. There is no guaranteed exclusivity. If someone else discovers your secret without stealing it from you, there's nothing you can do about it, although for most businesses this is not a significant drawback."[51] "The practical challenges of protecting secrets are more difficult to overcome than the legal ones, however. Paradoxically, the great explosion of innovation that has brought so many benefits to the world has also made it easier for thieves to steal valuable business information."[52]

[48] James Pooley, Trade Secrets. The other IP rights, WIPO Magazine, June 2013, Available on: http://www.wipo.int/wipo_magazine/en/2013/03/article_0001.html, accessed 24.04.2018

[49] Rules relating to Fees of 20 October 1977 as adopted by decision of the Administrative Council of the European Patent Organisation of 7 December 2006 and as last amended by decision of the Administrative Council of 13 December 2017, THE ADMINISTRATIVE COUNCIL OF THE EUROPEAN PATENT ORGANISATION, 2018, Supplementary publication 2 – OJ EPO.

[50] PCT fee table, 2018, WIPO official home page, Available on: http://www.wipo.int/export/sites/www/pct/en/fees.pdf, accessed 23.04.2018

[51] James Pooley, Trade Secrets. The other IP rights, WIPO Magazine, June 2013, Available on: http://www.wipo.int/wipo_magazine/en/2013/03/article_0001.html, accessed 24.04.2018

[52] Ibid.

As it was said above, unlike a patents, there is no public registration required in order to obtain a trade secret. A company can take steps by itself to have a valid trade secret.[53] In fact, even from the first imrpression it seems that for the startups this is one of the main chalanges startup companies has to face with since new enterpreneurs at early stage has limited amount of staff and its consists mainly of inventor or group of inventors having a lack of supply staff which is in charge of establishing protection procedure within the company. The other fact is that usually startup inventors are more focusing on product or technology invention, legal issues such as trade secret protection leaving neglected. Accordingly that endangers secret information on which startups rely in order to gain benefit in the future. Respectively, time also becomes as one of the conditions to assess considering most appropriate strategy for startup proetction.

The protection afforded by a patent last for 20 years.[54] In addition, if startup decides to submitt its patent application for international patent protection, it might take almoust three years (figure 2) which in case of startups is crucial time. And those three years will count in the whole period, thus in practice potential patent protection will remain around 17 years. Of course, startup company firstly could apply for national or European patent protection and that could be less time consuming. However, fast growth potential on international level is the essence of the startups in is one of the pre-conditions to attract investors. In turn "trade secret protection is available as long as the information is maintained in confidence and remains valuable. Thus, it is possible for a trade secret to extend into perpetuity, although the competitive advantage afforded by the trade secret will depend upon whether others are likely to discover the information by proper means."[55]

[53] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 43
[54] Ibid, p. 44
[55] Ibid, p. 44

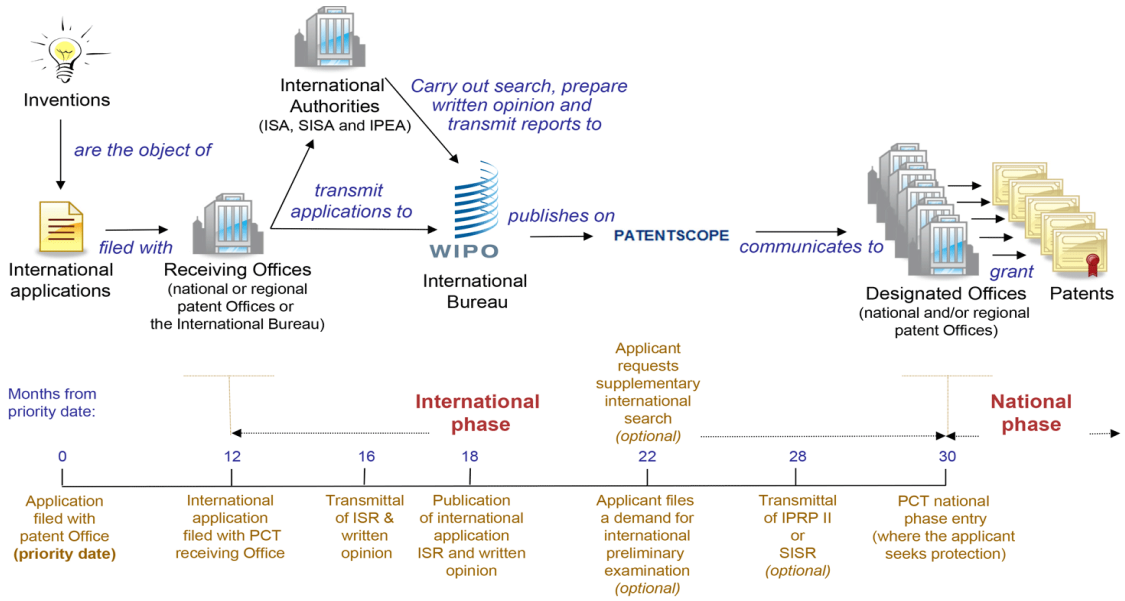

Figure 2: Institutional procedure and time frame for obtaining patent (source: wipo.int)

Patent protection will remain until it will expire accroding to the legal acts. And it does not matter whether it does have any business value or not. Meanwhile "trade secrets or undisclosed information may be protected as long as the data remains secret and has commercial value. Businesses may prefer to rely on trade secret when they are able to do so in order to take advantage of this potentially long duration. The drawback of the trade secret is that it only protects information which the holder controls (in secret). It does not preclude competitors of a business from copying a product once it is on the market, or from reverse engineering a process."[56] "This significantly limits the utility of the trade secret where the secret becomes apparent upon the marketing of the product. If the trade secret relates to a process, however which can practiced within the confines of the holder's factory or plant, the secret may be able to be maintained even after any product produced as a result of the process is marketed."[57]

Proprietorship of assets from a business perspective

Third issue which from point of view of accounting and proof to potential investors is to be considered as most uncertain is "proprietorship" of information which is held by startup company. "Trade secrets are are also often traded as if they were proprietary assets. Nonentheless courts have almost universally rejected the property approach, since"[58]

[56] Frederick Abbott, Thomas Cottier, Francis Gurry, The International Intellectual property system: Commentary and Materials, Part One, Kluwer Law international, Hague, Netherlands, 1999, p. 197
[57] Ibid, p. 198
[58] William Van Caenegam, Trade secrets and intellectual property. Breach of Confidence, Misappropriation and Unfair Competition,2014, Kluwer Law international, p. 20

"knowledge or information does not inherently have any seperate and distinct existence, and it does not diminish through consumption."[59] As James Hill noted: "The judical tendency to clasify trade secrets, and ideas generally, as property has its philosophical dangers. (..) if a thing has value, that is fact, but there is no automatic requirement that the law protect that thing as property. One problem with giving property status to everything of value is that it can lead to social paralysis."[60] That in fact puts patents forward in the lead comparing to trade secrets, since patents as legaly recognized intellectual property "furnish value as assets potentially useful for cross-licensing technology in settlement of patent infringement (or other) litigation. Patents are also highly attractive to investors and patents provide the ability to out-license the patent and derive immediate economic value. Accordingly that might serve as marketing and sales tool thus giving patent owner competitive advantage against competitors."[61]

In addition to the "potential revenue to be gained from commercial exploitation, the intellectual property also has value to the owning company as an intangible asset that can be included on the company balance sheet. This practice has become more common in the past 20 years because it can increase the overall asset value of the business, and its inclusion can change the capital gearing ratio of the company (the ratio of capital or equity to debt), which may raise the borrowing capacity of the company enabling it to leverage fnance for expansion. It also has other advantages in that a strong balance sheet boosted by intangible intellectual property assets could be a reason to argue for keeping down the equity demanded by independent investors. A strong balance sheet would also appeal more to a potential lender, although any lending bank would still expect to hold a legal charge against the ownership of the intellectual property as security for the borrowing, and might also want first claim to its licensing revenue should the company become insolvent."[62]

"Intangible factors play a predominant role in the ability of companies to innovate and their subsequent competitiveness within a knowledge-based economy. Such assets enable

[59] William Van Caenegam, Trade secrets and intellectual property. Breach of Confidence, Misappropriation and Unfair Competition,2014, Kluwer Law international, p. 16

[60] James Hill, Trade secrets, Unjust enrichment and the classifiaction of obligations, 4 Virginia Journal of law and technology 2, 1999, Availabnle on: http://vjolt.org/wp content/uploads/2017/Articles/vol4/issue/home_art2.html, accessed 27.04.2018

[61] Michael Szycher, Commercialization Secrets for Scientists and Engineers, 2016, first edition, CRC Press, Available on: Taylor&Francis.com, p. 246

[62] David F. Butler, Business planning for new venture. A guide for start-ups and new innovations, 2014, Routledge, New York, p. 233

knowledge-intensive economies to maintain their competitive position compared to resource- or labour-intensive economies."[63]

In fact from the business viewpoint usually that is the main reason why startups are considered as high risk ventures which can only attract investors, who are aware of these risks on behalf of potential profit in the nearest future. And there are various explanations for that. Firstly even among financiers there is no common and unitary reconginzed approach how to assess the assets which startup company has. And here comes out the second explanation, stating that therefore it could be that startup company does not have reasonable assets thus investors can only rely on future income and cash flow, hoping that this is rather success story not a death valley.

Legal protection aspects

As fourth issue which startup companies should bear in mind while choosing appropriate legal strategy for valuable information protection is legal aspects. "Many of the key strategic decisions in the area of trade secrets concern the choice between patent protection and continuing to protect a technological development as a trade secret. The monopoly rights granted to the patent owner are quite extensive and allow the owner to prevent any other person from making, using, or selling the invention eve if the person created the same invention idependenlty."[64] "A patent gives an inventor the right to exclude all others from making, using, or selling the patented invention for the term of the patent, even when the alleged infringer independently develops or discovers the invention. Contrary to the patents, trade secret protection does not create a monopoly, but serves only to prevent illegal or unauthorized use. Thus, trade secret protection does not foreclose discovery of the subject matter by fair and honest means, such as by independent development, accidental disclosure, or reverse engineering. Accordingly, while only patent can issue for any one invention, several persons could claim trade secret protection on the same process, information or item."[65]

It is considered that legal scope of patent protection is more favorable than trade secrets. The reason for such a assumptions is "secrecy" of trade secrets. It is kept secret and

[63] Patrizio Bianchi, Sandrine Labory, The economcial importance of intangible assets, 2004, Routledge, New York, p. 154
[64] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 43
[65] Ibid, p. 42 - 43

not generally known to others. Therefore it might be that no one knows about existence of trade secret as such. Accordingly it is more complicated to prove ownerhsip or, to be accurate, holder's rights, thus raise claime against infringer. In turn patent protection is opposite since ownership of the patents is legally published and protected by the governmental authorites. Nevertheless "investigating infringements to intellectual property ownership can be also a difficult and slow process. The process of legally enforcing payment of compensation via foreign courts may take time and incur further costs, and will not necessarily result in payment of damages anyway. There is also the issue of lengthy time delays during enforcement, as the patent life may have expired during the period between the infringement and the outcome of legal action. An injunction to stop short-term infringement is relatively easy and cheap to obtain, but if the case is lost then compensation may be payable to the defendant for lost trade. Subsequent legal action to enforce the intellectual property rights, to recover damages for the infringement and to prevent further infringement in the future can be slow and very expensive. For early stage or small businesses those legal costs can be prohibitive, leaving the business unable to afford to protect its own intellectual property. In summary, the reality is that the protection offered by a patent or other intellectual property is only as strong as its owner's ability and financial resources to enforce that protection."[66]

"Another issue facing small, innovative businesses is that of legal patent copying, whereby large companies often pay permanent members of staff to scrutinise the details of newly published patents that relate to their markets, to see if they can use the patent technology but with suficient modification to bypass its exclusivity and patent coverage. This is one of the reasons why some firms with innovations that can potentially create new market opportunities will adopt a first-to-market strategy to launch their new product and get it established as the market leader before their competitors have time to respond. Not only do they save the substantial costs of the patent process, but they might typically create a one or two year lead in the market with 100 per cent market share."[67] In addition holder of the potentially patentable information should be aware of so called patent trolls whoes aim is not to establish and gain profit by manufacturing and marketing the product, but rather to fill a patent application and seek compensation from the company who "was late". In fact, unless startup idea is not ready for market and still requires for R&D, most likley startups will not be a target of patent trolls. However, these risks should be kept in mind whenever product is

[66] David F. Butler, Business planning for new venture. A guide for start-ups and new innovations, 2014, Routledge, New York, p. 240
[67] Ibid, p. 241

ready and company is on their way to submit application for patent protection but for some reasons that is not done yet or application is failed. Therefore it is essential to fill the accurat and professional patent application.

In addition to financial issues which startup companies has to deal with there is also legal considerations. Even investors are aware of the financial risk, they also want to be sure that potential investment subject is properly secured. Trade secrets are easy to enforce and the main task is to keep it secret and unknown to others. Meanwhile patents are relatively costly and time consuming process. Morover for patent registration proffessional and expensive legal support is required which very often is one of the main interfering factor. From that persepective, especially if potentially patentable product is still in R&D process, it is more safer and cheaper to keep information secret. However, the main advantage of patents comparing ot trade secrets is proprietorship. Patents are intangible asssets while trade secrets are not considered as an intellectula property. Accordingly, potential startup investor may only rely on future profit. Bearing above mentioned in mind, startup company should assess how raw or ready is their patentable product, is it easy to obtain by public (e.g. reverse engineering) and what role time and money has in order to choose best strategy how to protect their potentially patentable information- patents under the various paten regulations, either trade secrets law under newly established trade secrets directive which is complicated to assess yet since it will come into force only 8th of June.

ROLE OF THE TRADE SECRETS DIRECTIVE IN PROTECTION OF POTENTIALLY PATENTABLE INFORMATION

Trade Secrets Directive was adopted in 2016 and Member States were obliged to implement it within their national legislation until summer of 2018.[68] Therefore for the time being it is hard to assess its effectiveness and practical consequences yet. Accordingly there various different legal unclarities which currently are up to date and the following criticism by lawyers and scholars addressed towards Trade Secrets Directive wording. Considering above mentioned author in this section is analysing role of Trade Secrets Directive in protection of startup innovations which contains potentially patentable information. That is provided by seeking for possible advantages and disadvantage of the Trade Secrets Directive which might affect future protection of innovations created by startup companies.

Possible advantages of Trade Secrets Directive for potentially patentable information protection

Due to the lack of practical considerations regarding the Trade Secrets Directive, under this sub-chapter is described, in author's opinion, main advantages of Trade Secrets Directive that could enhance startup innovation protection, encouraging disclosure and exchange of secret information within EU internal market thus contributing economic development and competitiveness. These advantages are the following: unitary legal framework for trade secret protection as such, unified definition, determination of what is considered as "unlawfull acquisition" as well as unitary approach regarding remedies and damages. Further below is provided deeper anaylsis of each of these four legal aspects.

Unitary legal framework within EU

"86% of companies and research institutes participating in a survey provided by EU Commission considered trade secrets as an important tool for business and research bodies in the EU to protect their valuable information. Particularly vulnerable to this threat were determined SMEs and small research institutions which often can neither afford and effectively defend formal intellectual property nor inform themselves about trade secrets protection nor risk defending their trade secrets in court in view of the risks and uncertainties

[68] Directive 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, Text with EEA relevance, OJEU L 157/1, 15.06.2016, Available on: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 23.04.2018

involved under current conditions."[69] Taking this into account, lack of a common legal framework and uniform definition of "trade secrets" within the European Union was considered as the first and most immediate consequence to settle.[70] Such a need is also justified with a fact that Specific statutory definitions was only found in the Swedish trade secrets law, in the Italian and Portuguese Codes of Intellectual Property and in the unfair competition laws of the Bulgaria, Czech Republic, Greece, Poland and the Slovak Republic. In Hungary and Lithuania, the statutory definition is set out in their respective Civil Codes. While in other Member States a definition is included either in the Companies Act, either notion was derived from case law and jurisprudence.[71]

Even those who critcize need for Trade Secrets Directive, aknowledges that legal certainty is perceived as one of the chief benefits of harmonisation. As one of the arguments by opponents of the Directive was that yet, we cannot be confident that legal certainty and a coherent EU framework for trade secret protection will ensue from the adopted Trade Secrets Directive. Of course, it should be agreed that Trade Secrets Directive creates several uncertainties and apparently leaves a significant amount of flexibility to Member States with regards to implementation and at least to some extent reasonable doubts arises whether the Directive will reduce legal fragmentation or provide legal coherence.[72] Most likely critics of the Directive are also right in regarding of possible legal framgentation since Trade Secrets Directive only provides minimum requirements which Member States should adopt, leaving the rest on the shoulders of Member States. However, on the other hand, by opposing to critics adressed to the Directive it should be emphasized, that it is more complicated to provide harmonized approach in protection of startup companies without appropriate unitary legal framework. Accordinly that could hinder development of the EU economy in a broad sense as well. Therefore alongside with financial tools of supporting startup companies provided by EU, legislator should also provide sufficient legal support. And in authors opinion Trade Secrets Directive has been as one of the most important steps towards that direction. Of course, there are and will be different opinions and criticism of various social

[69] EU Commission, Commission starff working document, impact assessment, Accompanying the document. Proposal for a Directive of the European Parliament and of the Council on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, unse and disclosure, Brussels, 28.11.2013 SWD(2013) 471 final, Available on: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013SC0471, accessed 09.05.2018

[70] Study on Trade Secrets and Confidential Business Information in the Internal Market, Final Study, April 2013 Prepared for the European Commission Contract number: MARKT/2011/128/D, Available on: http://ec.europa.eu/DocsRoom/documents/27703, accessed 23.04.2018

[71] Ibid.

[72] Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, p. 8

and economical groups regarding some of the provisions of Trade Secrets Directive. However, there should be no discussions in relation of necessity of unitary legal framework of trade secrets which could help new ventures to determine whether information they have, can be protected as trade secrets or not. And having unitary definition is one of the first steps towards that direction.

Unitary definition

Prior establishing protective measures, first task should be to determine what is to be proetected. Therefore first requirement is to have unitary definition which will be analysed further below.

Difficult issues can arise whenever it is necessary to identify and define trade secret. "The problems are often a result of the fact that there is no uniform definition of a "Trade Secret" that is accepted around the world."[73] And EU is not a exception. "As it is aformentioned only ten among Member States having specific legislation/provisions on protection of trade secrets also captured a definition of trade secrets. As a result, each jurisdiction has adopted different eligibility standards for information to qualify as trade secrets. In addition, even within the same jurisdiction, definitions are often spread over different pieces of legislation, which makes it more difficult to reconcile them in a unique and clear concept."[74] In turn that leads to the legal uncertainty and hinder cross – border disclosure of secret information held by the startup company.

In common law system "trade secrets has relied on the use of equitable principles, rather than precise definition, in dealing with questions as to whether or not a trade secret existed. However, the equitable nature of the trade secrets law further complicates the issue in definition, since the attitude of the courts towards protection of particular item may well be influenced by conduct of the defendant as well as the nature of the item at issue and the public interest in permitting access to the information."[75] Due to intangible nature of the trade secrets, probably "equitable principle" approach could be assessed as more appropriate rather than strictly adhering to the wording of the statutory law.

[73] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 69

[74] Study on trade secrets and confidential business information in the internal market, Final study, April 2013, prepared for European Commission Contract number: MARKT/2011/128/D , p. 4, available on: http://ec.europa.eu/internal_market/iprenforcement/docs/trade-secrets/130711_final-study_en.pdf , accessed 03.03.2018

[75] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 77

However within EU there is lack of definition as such. Thus there is also lack of legal ground on which trade secrets could establish their own principles. As Trade Secrets Directive recital states, it is crucial to "establish a homogenous definition of a trade secret without restricting the subject matter to be protected against misappropriation. EU authorities further emphasizes that such definition should therefore be constructed so as to cover know-how, business information and technological information where there is both a legitimate interest in keeping them confidential and a legitimate expectation that such confidentiality will be preserved."[76] Bearing that in mind EU adopted Trade Secrets Directive provides including the following definition:

"*trade secret' means information which meets all of the following requirements:*

(a) it is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question;

(b) it has commercial value because it is secret;

(c) it has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret."[77]

In fact EU authorities abstained from legal creativity thus wording of trade secrets directive was overtaken from TRIPS agreement[78] without any improvements or adjustments. In turn definition of trade secret as established in TRIPS agreement, particulary Article 39 (2) subparagraph (a) to (c), essentially is derived from the Uniform Trade Secrets Act.[79]

Some criticism must be addressed towards legislator by reproaching lack of any adjustments since definition of "trade secret under TRIPS agreement simply requires that Members only gives natural and legal persons the possibility of preventing information lawfully within their control form being disclosed. It does not matter, thereof, how such possibility is given. What matter is that it exists. Accordingy, it follows that WTO Members are left free to determine the appropriate method of implementing the provisions of TRIPS

[76] Directive 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, Text with EEA relevance, JO L 157/1, 15.06.2016, Available on: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 23.04.2018

[77] Ibid.

[78] Trade-Related Aspects of Intellectual Property rights (TRIPS), The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994, Available on: https://www.wto.org/english/docs_e/legal_e/27-trips_01_e.htm, accessed: 23.04.2018

[79] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 574

within their own legal system and practice."[80] "Whilst it is the generally accepted definition, it should be not forgotten that this definition is very wide in scope and covers immense variety of technical and commercial information."[81] Therefore, Supposing that main objective of Trade Secrets Directive is to harmonise regulation within EU internal market, it is doubtfull that just copying definition from TRIPS agreent will reach that objective. Perhaps it could be explained as the EU authorities desire to comply with TRIPS agreement, since EU is signing party of it and it is also adopted not only in each Member state but also on EU level as well.[82] However, that increases risks of divergent interpretation among Member states. Therefore it is even more essential to assess content of the trade secrets definition. Further below it is divided into three main pre-conditions which should be taken into account as precondition for the information to be considered as trade secret.

Having a relatively broad scope of the definition of course next question which arises is what exactly is ment to be "secret" and what information falls under this provisional term. In addition also everyone is trying to forsee how courts will interpret one of the main pre-conditions which is "secrecy". In fact to be "secret", it also must pass couple pre-tests thus also secrecy as one of the trade secret pre-conditions will be divided into smaller parts and each part will be analysed sepereately thus trying to determin what are factual requirements for information to be secret.

Article 2 (1) subparagraph (a) of Trade Secret Directive defines that: "information is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question"[83]

As it comes out the information must be held secret. But then couple questions arises. For instance, startups usually are one of those enterpreneurs which in order to promote their product or service and attract potential investors, are forced to some extent disclose potentially secret information. Therefore, the question arises whether the information can remain secret or it is considered as information available on public domain?

[80] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 568
[81] Justine Pila, Paul Torremans, European Intellectual property law, Oxford university press, 2016, p. 541
[82] Councils decision 94/800/EC (of 22 December 1994) concerning the conclusion on behalf of the European Community, as regards matters within its competence, of the agreements reached in the Uruguay Round multilateral negotiations (1986-1994), Official Journal of the European Communities, L336/1, 23.12.1994, Available on: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31994D0800:EN:HTML, accessed 23.04.2018.
[83] Directive 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, Text with EEA relevance, JO L 157/1, 15.06.2016, Available on: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 23.04.2018

Of course, secrecy is the most important factor in determining whether information is to be considered a trade secret. "It is "the threshold issue in every case" and there are no exceptions to the rule that a trade secret must be "secret"."[84] "Failure to take substantial measures to maintain the secrecy of the purported trade secret is "fatal" to finding the existence of the trade secret."[85] It is contrary to the "patent law where the standard for deciding whether information is in the public domain is absolute. This means that, once information is in the public domain, it can never become secret."[86] Therefore startup company alongside with R&D process from a first day should also keep information secret thus it does not loose its secrecy and does not become generally known to others. Accordingly, that guides to one of the first secrecy pre-condition and it is "Generally known".

"Trade secret may incorporate data that is in the public domain. However one of the main difficulties in characterizing this data as the subject of protection is how to distinguish it from information that is openly accessible for public."[87] The answer is that the information shall be unavailable, i.e. "it must not be generally known or available. Information that can be found from an available public source is not a trade secret."[88] Meanwhile TRIPS agreemet and Trade Secret Directive specifies that, secret, when it covers a complex body of information, lies in the body, not in the individual elements. This means that even if some of the elements are known, the information as a whole may remain secret.[89] That said, even in a part of information as such could be publicly accessable, information still can remain as a trade secret, i.e. a "combination of characteristics or components" each of which is itself in the public domain can still together create a "unique combination" that affords a competitive advantage.[90] Publicity is one of the key aspects how startup companies as convincingly as possible inform about their innovations in order to attract potential investors and customers. Therefore, part of their knowledge inevitably becomes publicly available. However, most valuable information, specific information should be kept secret.

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[84] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 82

[85] JULIE RESEARCH LABORATORIES, INC., v. SELECT PHOTOGRAPHIC ENGINEERING, INC., No. 92 Civ. 0613 (RLC). United States District Court, S.D. New York. November 24, 1992, 810 F.Supp. 513 (1992)

[86] Lionel Bently, Brad Sherman, Intellectuall Property Law, 4th edition, Oxford university press, 2014, p. 1153

[87] Frederick Abbott, Thomas Cottier, Francis Gurry, The International Intellectual property system: Commentary and Materials, Part One, Kluwer Law international, Hague, Netherlands, 1999, p. 197

[88] Securing Intellectual Property. Protecting Trade Secrets and Other Information Assets, Butterworth-Heineman, 2009, page 9

[89] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 575

[90] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 78

Second secrecy pre-condition is that it must no be "readily accessible". "As trade secret definition is prescribed in relative terms, of course some uncertainty arises about when information is "readily accessible"[91] "since it comes out from the regulation that it is significantly important for certain information to be held secret is that it be not "readily accessible."[92] "The word "accessible" refers to the information itself, and not to the physical support embodying the secret. Otherwise having access to the documents or products embodying the secret would destroy the secrecy, even if the knowledge were not automatically ascertainable."[93] From startup perspective there are two issues. Firstly, it is important to writte down and fix all information which is obtain from R&D process. Otherwise in case of court proceedings it will be almoust impossible to prove that particular startup company or group of inventor's helds that information legally. However, secondly, that information must be kept secret so it is not readily accessible to unauthorized persons since that might cause lose of secrecy. That kind of information should be especially "hide" from skilled persons. And that guides to the third secrecy pre-condition "persons who normally deal with that kind of information".

Generally known "information that is a matter of general knowledge cannot be appropriated as one's trade secret. It is not necessary that the information be available to the public at large. It is sufficient if the participants in the relevant industry are aware of the information."[94] By analogy this could be compared with persons "skilled in the art" in the area of patents. However, most likely these broad terms might guide to some complications regarding application and interpretation since it is hard to assess which persons could be those persons who normally deal with that kind of information. Are there any requirements for thoses persons to be included in that category? In case of ligitation, as one of possible solutions could be an opinion of idependet expert or group of experts who assess whether participants of the particular industry could be aware of such a information. Accordingly, if vast majority ar not relative with particular information, that could mean that secret information is not obtained lawfully. Of course, that should be assess in conjunction with other evidences.

Trade Secrets Directive stipulates that information can considered as trade secret if it have commercial value. A reasonable question arises how to assess the value of the

[91] Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, p. 9
[92] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 574
[93] Ibid, p. 575
[94] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 85

information? Inventors usually overestimates their product mainly on the basis of the work and time invested. Meanwhile investors are more cautious. However, from a legal viewpoint to be a trade secret "the information must have actual or potential economic value. In order to prove that information is a trade secret, startup company must show the information – actually or potentially – confers an economic advantage in marketplace over those that do not have it,"[95] since commercial value means also competitive value.[96] Accordingly, "if the value of secret information does not change because of its disclosure, acquisition, or use, trade secrets protection regulation does not apply."[97]

While it is found out that information to be trade secret must have commercial value, it still remains unclear what and if at all value does startup product has? This is important since in case of litigation injured party will have to proof value of information company holds. "Actually the economic value requirement for trade secret protection means that the information must have sufficient value in the operation of the business to provide the owner or use with an actual or potential economic or competitive advantage over others who do not have the information. Therefore it is not necesary that the trade secret create a significant economic advantage. However, it is required that the trade secret have more than trivial value and that such value not be "too speculative"."[98] Also Trade Secrets Directive excludes trivial information.[99] That in turn lead to the next question. What is to be considered as "trivial" since holder of the information might consider particular data as secret. Likewise, if someone has tried to acquire certain information unlawfully, that means that information though does have at least some competitive value. "In common law in the context of trade secrets, the courts have occasionally suggested that, to be protectable, an idea must be economically valuable or commercially attractive. The trivial exception has had little impact upon the information protected by breach of confidence. This is because courts have been reluctant to label information as trivial. The reason for this is that it is impossible for the court to determine whether such information is important or not."[100]

[95] Securing Intellectual Property. Protecting Trade Secrets and Other Information Assets, Butterworth-Heineman, 2009, page 9
[96] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 578
[97] Ibid, p. 579
[98] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 95
[99] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018
[100] Lionel Bently, Brad Sherman, Intellectuall Property Law, 4th edition, Oxford university press, 2014, p. 1145

"While issue of proof become much more difficult, it is not necessary for a trade secret owner to derive actual financial benefits in order for the information to be eligible for protection. In fact, the trade secrets must only give one "an opportunity to obtain an advantage". This is particulary important where an innovator has expended time and effort in developing a trade secret that may generate revenues from use in the future, but the innovator lacks the current resources necessary for commercialization."[101] In addition it should be noted that"also negative knowledge is protected unless such knowledge has value because it gives its owner a competitive advantage over competitors."[102]

In a short conclusions it should be pointed out that commercial value is one of the pre-conditions for information to be a trade secret. It is complicated to determin the value of particular information, especially if it is kept secret. However, it is considered that information has value if it provides competitive advantage for the holder of the information. Even Trade Secrets Directive excludes trivial information as protective under the Directive, if holder of the information can prove that particular knowledge gives him advantage against competitors it is trade secret. Of course unless it meets all other trade secret requireements. And one of these requirmenets is to provide information kept secret.

"The third limb of the definition of 'trade secret' requires the person lawfully in control of the information to have taken reasonable steps under the circumstances to keep it secret. In determining what constitutes 'reasonable steps', will the assessment be subjective, according to the circumstances of the particular business involved and the cost of those measures to that business? Or will a more objective assessment be preferred whereby a trade secret holder has to point to the presence of usual or standard protective measures that are adopted in the industry?"[103]

"Entrepreneurs often seem to forget that trade secret strategies start by defining knowledge that is regarded as a trade secret. Determination of existing trade secrets constitutes a crucial element of entrepreneurs' overall strategy to protect and control their proprietary knowledge (including trade secrets). Where an entrepreneur lacks the capabilities to define its trade secrets, it is impossible to properly communicate their existence to employees, business partners, etc. As a result, courts are not in a position to uphold

[101] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 96
[102] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 569
[103] Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, p. 10

entrepreneurs' ambiguous claims for infringement of their trade secrets."[104] Therefore it should be emphasized once again that at the early stage of the development, every information should be kept secret, especially if startup product is still in R&D stage and is vague.

"A company claiming a trade secret must prove that the company uses (and has used) reasonable measures to maintain secrecy. This means that to prove a trade secret, company must make an affirmative showing that all times it has used and is using reasonably confidentiality procedures and protection.[105] Where the value of the information is clear, and it is evident that the information is not generally known by others, the courts may place less weight on the required demonstration of security measures and focus more upon such things as the conduct of the defendant in acquiring the trade secrets. Taking various preacautions to protect trade secret information can be helpful in any future litigation regarding missappropriation."[106]

However, there is no clear answer what steps are considered as reasonable. Whether it is strong extensive and developed IT system or safe deposite box? Perhaps in case of startup companies, locked office with alarm is sufficient? "Standard by definition imposes different requirements depending on the circumstance of the holder of the data. Steps such as requiring employees to execute confidentiality agreements and limiting access to sensitive information are some of those that would customarily be used by a business to keep its data secret."[107] That said, every action which unambiguously expresses that particualr information is confidential, should be considered as "reasonable steps".

Likewise it was already mentioned above, reasonable steps keeping information goes alogside with capabilty to proof existence of information as such and infringement. "First, it is necessary to identify the information in issue. This is not an inquiry into quality of the information per se, so much as it is as preliminary examination as to whether their information has been identified in such a way that the action can proceed. And if claimant does not identify the information in sufficient detail, their action may be struck out on the basis that it is speculative and abuse of process."[108]

[104] Aleksei Kelli; Tonis Mets; Heiki Pisuke; Elise Vasamae, Trade Secrets in the Intellectual Property Strategies of Entrepreneurs: The Estonian Experience, 35 Rev. Cent. & E. Eur. L. 315 (2010)
[105] Securing Intellectual Property. Protecting Trade Secrets and Other Information Assets, Butterworth-Heineman, 2009, page 9
[106] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 87
[107] Frederick Abbott, Thomas Cottier, Francis Gurry, The International Intellectual property system: Commentary and Materials, Part One, Kluwer Law international, Hague, Netherlands, 1999, p. 197
[108] Lionel Bently, Brad Sherman, Intellectuall Property Law, 4th edition, Oxford university press, 2014, p. 1145

Under this sub-chapter was anaylised first main advantage of new Trade Secrets Directive – unitary regulation as such and common definition which determins that information to be secret must comply with three requirements – secrecy, commercial value and reasonable steps to keep informationation secret. Even definition is wide scope and it consists of many legal unclarities, it consists of at least minimum requirements of what to be considered as secret. Accordingly that will contribute predicatbility thus providing enterpreneurs, including startup companies, with clear rules of the game – what should be done to protect valuable information as trade secret.

Unlawful acquisition

Before seeking remedies and damages, it should also clarify what exactly is violated and when it is considered as occurred. The Trade Secrets Directive recital notes that "Trade secrets as one of the most commonly used forms of protection of intellectual creation and innovative know-how by businesses are the least protected by the existing EU legal framework against their unlawful acquisition, use or disclosure by other parties. Innovative businesses are increasingly exposed to dishonest practices aimed at misappropriating trade secrets, such as theft, unauthorised copying, economic espionage or the breach of confidentiality requirements, whether from within or from outside of the EU. Recent developments, such as globalisation, increased outsourcing, longer supply chains, and the increased use of information and communication technology contribute to increasing the risk of those practices."[109] Some opinions are even more categorical stating that economic espionage and intellectual property theft are as real a threat as terrorism or global warming. And this allegation is approved with facts. Thus, according to the international chamber of commerce global fiscal loss caused by intellectual property theft is more that 600 billion dollars annully.[110]

Considering above mentioned such a determination is one of the main advantages whcih will "contritbute effective and comparable legal means for protecting trade secrets across the EU, incentives to engage in innovation-related cross-border activity. Therefore, in order to prevent growing risks of unlawfully acquired trade secrets within internal market, Trade Secret Directive imposes Member States to ensure that trade secret holders are entitled

[109] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018

[110] Cristopher Burgess, Richard Power, Secrets Stolen, Fortunes lost. Preventing intellectual property theft and economic espionage in the 21st century, Syngress Publishing, 2008, p. 27

to apply for the measures, procedures and remedies in order to prevent, or obtain redress for, the unlawful acquisition, use or disclosure of their trade secret."[111]

Article 4 (2) of the Trade Secrets Directive stipulates that "the acquisition of a trade secret without the consent of the trade secret holder shall be considered unlawful, whenever carried out by unauthorised access to, appropriation of, or copying of any documents, objects, materials, substances or electronic files, lawfully under the control of the trade secret holder, containing the trade secret or from which the trade secret can be deduced or any other conduct which, under the circumstances, is considered contrary to honest commercial practices."[112] In turn Article 4 (3) determines what is to understood as unlawfull use and disclosure of trade secrets. It provides that the "use or disclosure of a trade secret shall be considered unlawful whenever carried out, without the consent of the trade secret holder, by a person who is found to meet any of the following conditions: (a) having acquired the trade secret unlawfully; (b) being in breach of a confidentiality agreement or any other duty not to disclose the trade secret; (c) being in breach of a contractual or any other duty to limit the use of the trade secret."[113]

As it turns out there are there unnlawfull action steps included the Directve: acquisition, use and disclousure. Accordingly the next step should be to clarify whether all these three steps should occure and what happens if only one of these actions has been occurred?

As, Nuno Pires de Carvalho explains, "this enunciation of acts follows a chronological order: First, trade secrets shall not be disclosed. Second, if their disclosure is a possibility (if there is a person willing to unlawfully disclose the secret), it shall not be acquired by another person. Third, even if disclosed and acquired by another person in an unlawfull manner, it shall not be used by that person. However, there is no need that all three acts be unlawfull. For instance, a licensee that promises to stop using a trade secret after the expiry of the contract has acquired it in a lawfull manner. If it continues using it after the expiry date, the use will be unlawful in spite of the secret having been acquired lawfully."[114] That means, that each of these three actions triggers breach of rights of the trade secrets holder if by such an actions secret is lost or economical interests of trade secrets holder are infringed.

[111] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018
[112] Ibid.
[113] Ibid.
[114] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 571

However, the Directive also contains some uncertainties as well. For instance it seems unclear definition of "honest commercial practices", stipulated in Article 4 (2) (a). In relation to TRIPS agreement "it has been explained that contrary to honest commercial practice is understood, inter alia, practices such as theft, bribery, breach of contract, inducement to breach, electronic and other forms of commercial espionage, and includes the acquisition of trade secrets by third party who knew, or had reasonable grounds to know, that such a practices were involved in the acquisition."[115] It must be said that there is no clear understanding of "honest commercial practices". Also Trade Secrets Directive does not provides such a explanation. "What is 'honest' depends on the values of a particular society at a given point in time. There is no absolute, universal rule to determine when certain practices should be deemed commercially dishonest and, hence unfair."[116] Therefore courts will have to define whether acquisition of trade secret is dishonest or unfair.

However, despite unclarities, it must be emphasized that such a determination will contribute promotion of clarity and common understanding. That narrows the boarderline which defines when acquisition of trade secret is unlawfull and when person has acquired information lawfully. Of course there is certain criticism towards setup of unlawfull acquisition, use and disclousure, worrying that "the provisions gives protection of the trade secrets extremely wide scope. And in certain circumstances such a wide scope of protection will not be appropriate and could trample on other rights. Therefore, the remainder of the effort lies with the Member states and the courts when they implement and apply the Directive."[117] Also wording of some of provisions seems unclear. Nevertheless despite certain flaws and bearing in relatively wide scope of the trade secrets, such a legal framework as such should be highly appreciated.

Remedies

Alongside with other preferentials of the Trade Secerets Directive, one of the most important is related to the regulation of remedies. In fact reaosnable extent of Trades Secets Directive is devoted to this issue. The directive provides unitary approach to the rights of injured party. Of course, as the rest of the Directive also these rules ar relatively wide scope. However it provides general rules and principles which hopefully will give at least frame of

[115] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 564
[116] Carlos M. Corea, Trade Related Aspects of Intellectual Property Rights: A Commentary on the TRIPS Agreement, Oxford University press, 2007, p. 371
[117] Justine Pila, Paul Torremans, European Intellectual property law, Oxford university press, 2016, p. 542-543

the picture how to protect their secret information. Further below ar assessed main advantages, including, confidentiality requireements and various precautionary measures.

Trade Secrets Directive authorize courts to limit access to information during litigation. That is explained with a fact that "the prospect of losing the confidentiality of a trade secret in the course of legal proceedings often deters legitimate trade secret holders from instituting legal proceedings to defend their trade secrets, thus jeopardising the effectiveness of the measures, procedures and remedies provided for."[118] In order to provide such a protection which could promote to settle this issue Article 9 (2) stipulates that member States shall ensure that "the competent judicial authorities may, on a duly reasoned application by a party, take specific measures necessary to preserve the confidentiality of any trade secret or alleged trade secret used or referred to in the course of legal proceedings relating to the unlawful acquisition, use or disclosure of a trade secret."[119]

Ofcourse during discussion prior adopting the Directive lot of criticisms was addressed towards this restrictions blaming that it violates rights for the fair trial and open court hearings. Indeed, it should be agreed that these concerns has ground, since that is one of the fundamental rights. Therefore, taking that into account Trade Secrets Directive recital explains that "such a measures, procedures and remedies should not jeopardise or undermine fundamental rights and freedoms or the public interest. The Directive imposes courts to ensure the right to an effective remedy and to a fair trial as well as specific requirements aimed at protecting the confidentiality of the litigated trade secret in the course of legal proceedings instituted for its defence."[120] Also according to the Article 9 (3) when deciding on the measures and assessing their proportionality, the competent judicial authorities shall take into account the need to ensure the right to an effective remedy and to a fair trial, the legitimate interests of the parties."[121]

Nevertheless, no matter how courts will reconcile collision of the rights of both parties, "it is safe to say that there is no on-size –fits-all solution. All measures used in isolation seem to have at least one flaw: either the defendant's right to a fair trial is excessively violated or there is significant risk that injured party might loose secrecy of its valuable information. Hence the national legislature will have to implement several tools in

[118] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018
[119] Ibid.
[120] Ibid.
[121] Ibid.

order to balance the interests of the trade secret holder and the defendant's right to a fair trial."[122]

"Until now the trade secret holder, the victim of the disclosure or the misuse, faced a major dilemma: to publicly disclose, for the need of the process, the secret misused with the risk of further accentuating the disclosure of its content, or to lose his trade secrets case. This issue is essential in the perspective of the harmonisation."[123] Therefore this restriction definitely is one of the main advanatges, that probably in the future will contribute injured party to go to the court in case of the infringement. At the same time courts will have to settle very complicated and sensitive issue, balancing between rights of the both parties.

As it was discussed above, secrecy is one of the main precondition for information to be a trade secret. "Once this character is lost, by whatever means, including by fraudulent acts, no further protection can be claimed. Of course, if disclosure to the public has taken place without the authorization of the person who controlled the information, he can seek compensation of damages or other punishment, as available under the applicable law, but the 'undisclosed' nature of the information cannot be restored, and any person would be authorized to use it freely."[124]

Accordingly alongside with confidentiality restrictions, court is also authorized to, at the request of the trade secret holder, order three provisional and precautionary measures against the alleged infringer. Firstly, court may order the cessation of or, the prohibition of the use or disclosure of the trade secret. Secondly court may also order the prohibition of the production, e.g. selling, offering, exporting infringed goods etc. And finally court may order the seizure or delivery up of the suspected infringing goods, including imported goods, so as to prevent their entry into, or circulation on, the market.[125]

No matter what measures injured party may request, prior ordering provisional measures the Directive requires that courts must take into account specific cicumstances. For instance, courts shall assess the value of the trade secret, the measures taken to protect the

[122] Thomas Farkas and Peter Koch, The disclosure-fair trial dilemma when enforcing trade secrets in civil court proceedings, Journal of Intellectual property law&practice, 2016, Vol. 11, No,12, p. 901-909

[123] Jean Lapousterle, Christophe Geiger, Norbert Olszak, Luc Desaunettes, Legislative Comment What protection for trade secrets in the European Union? A comment on the Directive proposal, E.I.P.R. 2016, 38(5)

[124] Carlos M. Corea, Trade Related Aspects of Intellectual Property Rights: A Commentary on the TRIPS Agreement, Oxford University press, 2007, p. 370

[125] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018

trade secret, the conduct of the respondent, the impact of the unlawful use or disclosure of the trade secret as well as the legitimate interests of the parties, the public interest and the safeguard of fundamental rights. However, prior that injured party or claimant must be able to prove a trade secret exists, the fact that the applicant is the trade secret holder and the trade secret has been acquired unlawfully, is being unlawfully used or disclosed, or unlawful acquisition, use or disclosure of the trade secret. [126] Meanwhile in common law "before a court prospectively grants preliminary injunctive relief, the trade secret owner must show the existence of imminent wrongfull disclosure or use and some combination of the following elements: a) irreparable harm; b) substantial likelihood of success on the merits of the issue; c) a balance of hardships that favors isuing the injunction; d) that issuance of the injunction is not contrary to the public interest."[127]

Another specific circumstance which court will have to deal with but which is not stipulated in the Directive directly is emergency. "In order to be granted, interim measures must always concern an emergency situation in the sense that it is unacceptable for the applicant to wait until a decision is made in ordinary proceedings."[128] Emergency is important pre-condition which courts will have to consider since granting injunctions against threatened misappropriation, will precent disclosure before it actually occurs**.**[129]

Of course there is also the opposite opinion stating that there seems to be no good reason to order interim relief against third parties *before* it is established that they are in fact "alleged infringers" as opposed to entirely innocent third parties.[130] "In fact the injunctions is a matter of the equity which aim is to balance the interests. On one hand, there is the interest of the holder, who loses from the reduction of the economic value of its asset as well as from the loss in its competitive advantage that results from the secrecy of the information. On the other hand, there is the interest of the defendant in using that information. As a matter of

[126] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018

[127] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 216

[128] Roland Knaak, Annette Kur, Reto M. Hilty, Comments of the Max Planck institute for innovations and competition of 3 June 2014, on the proposal of the European Commission for a Directive on the protection of undisclosed know-how and business information (trade secrets) against their ulawful acquisition, use and disclosure of 28 November 2013, COM (2013) 813, Final, Maxx Planck institute for innovation and competition Research paper series, No. 14-11, p. 16

[129] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 213

[130] Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, p. 19

course, the interests both the plaintiff and the defendant are to be taken into account only when they are legitimate."[131]

Meanwhile Article 10 (2) should be assessed criticaly since it allows courts, as an alternative, allow the continuation of the alleged unlawful use of a trade secret subject to the lodging of guarantees intended to ensure the compensation of the trade secret holder.[132] In fact this is confusing. For instance, some obtains unlawfully secret information of startup company. Startup company goes to the court and claim for interim injunctions in order to prevent use of secret information. However, infringer decides to promise guarantee fee for the use of the secret information. It is unclear how court will be able to determine what will be the value of this guarantee fee. Also question arises when finding out what will be the measures if infringer breaches court order. Antother legal oddity comes out. That said injured party, contrary to its will, enters into sort of "contractual relationship" against its will. Needless to say that contractual relationship contrary to parties will in its substance is to be considered as legal defect. Indeed Trade Secrets Directive does not include the possibility that courts impose penalty payments in accordance with their national law in the event that interim measures are violated. This gap should be closed. Without such possibility, it cannot be ensured that the interim measures will be duly observed.[133] Accordingly also provision which allows infringer to guarantee fee for the use of the secret information does not provide balance between trade secrets holders and infringers rights.

Remedies set out in the Trade Secrets Directive will serve as important tool for trade secret protection and considered as one of the main advantages of the Trade Secrets Directive from a business perspective. Firstly, injured party is able to require for confidentiality during the court proceedings. Secondl, injured party may require for precautionary measures in order protect secret information.

[131] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 572

[132] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018

[133] Roland Knaak, Annette Kur, Reto M. Hilty, Comments of the Max Planck institute for innovations and competition of 3 June 2014, on the proposal of the European Commission for a Directive on the protection of undisclosed know-how and business information (trade secrets) against their ulawful acquisition, use and disclosure of 28 November 2013, COM (2013) 813, Final, Maxx Planck institute for innovation and competition Research paper series, No. 14-11, p. 16

Damages

Whenever violation is proven, injured party may seek for damages. Approach how to determine damages varies from coutry to country. And Trade Secrets Directive does not offer revolution. In fact it rather provides approach of principles and conditions which should be taken into account when determining amount of damage. "In addition to, or in lieu of, injunctive relief, a trade secret owner may recover monetary damages. The method used by the court in computing damages varies, and courts have been known to award damages based on the trade secret owner's probable loss, the misappropriators benefits, profits, or advantages, a reasonable royalty, or some combination of measures."[134] "Because secrets lose their value when they are publicly disclosed and have their value reduced when they are unlawfully acquired and used by others, the payment of damages is called for only when the injunction alone does not restore the situation to its previous state."[135]

Article 14 of the Trade Secrets Directive provides that the courts "upon the request of the injured party, order an infringer who knew or ought to have known that he was engaging in unlawful acquisition, use or disclosure of a trade secret, to pay the trade secret holder damages appropriate to the actual prejudice suffered as a result of the unlawful acquisition, use or disclosure of the trade secret. When setting the damages authorites shall take into account all appropriate factors, such as the negative economic consequences, including lost profits, which the injured party has suffered, any unfair profits made by the infringer and, in appropriate cases, elements other than economic factors, such as the moral prejudice caused to the trade secret holder by the unlawful acquisition, use or disclosure of the trade secret. Alternatively, the competent judicial authorities may, in appropriate cases, set the damages as a lump sum on the basis of elements such as, at a minimum, the amount of royalties or fees which would have been due had the infringer requested authorisation to use the trade secret in question.[136]

There is no discussion regarding obligation to cover injured party losses as such. The differences arises whenever it comes to assessment of losses since in every Member state courts have different approach. For instance, schoolars representing common law prescribes that there are two basic methods for assessing damages for misappropriation of trade secrets:

[134] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 221

[135] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 571

[136] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018

one, the damages sustained by victim (the traditional common law remedy), and the other, the profits earned by the wrongdoer by the use of the misappropriated material. Ordinarily a plaintiff may recover either, but not both, because to allow both would permit double recovery. Since the objective in allowing damages is to compensate the plaintiff for the difference in his position before and after the misappropriation of his secret, his probable loss may be the more significant measuring rod than the misappropriatior's actual gain."[137] "Court takes into account such things as lost of profits, lost of value of a business, the plaintiff costs (e.g. time, labor, money) in developing the trade secret, and the costs incurred by the plaintiff in attempting to remedy the effects of misappropriation. However, the trade secret owner cannot recover for damages that are not directly related to the misappropriation, such as the costs incurred by the owner in protecting the confidentiality of the secret. Courts are willing to accept projections based upon profits or sales as evidence of future losses from the misappropriation and will aslos examine trends in the market indicating that the vloume of sales would have increased in the absence of the acts of the misaprorpriator."[138]

"In common law countries such an approach reflects an justified equitable principle that wrongdoers should not be allowed to unjustly enrich themselves at the expense of another. The amount of damages under this measure is both the misappropriator's profits, which obviously is the financial gain the defendant derived from selling or using the trade secrets, and the savings the defendant enjoyed from not having to spend the same amount in developing the trade secret as the plaintiff."[139] "If the information is a trade secret, the plaintiffs are entitled to have their trade connections protected and it is the protection of trade connection, not damages, which the plaintiff or any other trader in these circumstances is primarily concerned to obtain and needs to obtain."[140] Damages are just a one of the options how to compensate injured party. However, that's not the main one. The main target is to restore situation to its previous state and to protect trade secret through keeping it secret. It should be appreciated legislators intend to provide various legal provisional tools which courts may use in order to provide that information reimains secret and injured party is compensated fairly.

In this sub-chapter author analysed main advantages of the new Trade Secrets Directive from the viewpoint of startup company. Firstly finaly there is common unitary

[137] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 222
[138] Ibid, p. 223
[139] Ibid, p. 223
[140] Nuno Pires de Carvalho, The TRIPS regime of patent rights 3rd edition, 2010, Kluwer law international, p. 571

regulatory framework within EU which provides trade secret protection. Even it is wide scope and to some extent also vague, it must be kept in mind that this law is quite new and also unknow within EU. As it is with every "new law", time and practice will fill the provisions with content and clarify unclear issues. Secondly, the Directive provides one unitary definition which consists of pre-conditions that must be fulfilled so that information becomes secret. These three elements are secrecy, commercial value and reasonable steps which is required to keep information secret. Thirdly, the Directive stipulates conditions under which information is to be considered unlawfully acquired, used or discloused. That definitely will help courts to determine whether there is infringement act or not. Fourth and fifth advantage of this Trade Secrets Directive are interrelated and they are remedies and damages. Injured party has rights to require confidentiality during the court proceeding as well as precautionary measure in order to prevent use of trade secrets.

Possible imperfections of Trade Secrets Directive for potentially patentable information protection

From a position of company which hold valuable innovative information Trade Secrets Directive as such provides various advantages. However since it is wide scope it also contains provisions which should be assessed critically or at least cautiously. Further in this sub-chaper author provides critical assessment and analysis of some of provisions which from startup company business perspective is to considered as disadvantageous and discouraging.

Reverse engineering

It is hard to measure or count the information due to its intangible nature. Even more, since it is kept secret, it might be that no one knows that such an information even exists. Therefore it is only reasonable that unlike patents, reverse engineering in relation with trade secrets is not prohibited. However, from a position of the newly developed startup company this could be considered as shortage of the Directive, especially if innovation is product easily accessable for reverese engineering. Further below are the analysis of the provisions stipulated in the Trade Secrets Directive and its critical assessment.

Trade Secrets Directive recital explains that in the interest of innovation and to foster competition, the provisions of the Directive should not create any exclusive right to know-how or information protected as trade secrets. Thus, the independent discovery of the same know-how or information should remain possible. Reverse engineering of a lawfully acquired product should be considered as a lawful means of acquiring information. Therefore Article 3 (1) (b) determines that "observation, study, disassembly or testing of a product or object that

has been made available to the public or that is lawfully in the possession of the acquirer of the information who is free from any legally valid duty to limit the acquisition of the trade secret."[141]

"The rule is that trade secret protection is not available for information that is readily ascertainable by proper means by others is similar in many aspects to the requirement that the information not be generally known to the public. If competitors are able to acquire or duplicate the information by proper means without particular difficulty, then it is unlikely that the information will meet the required standard or relative secrecy, regardless of the measures taken to protect information."[142] That said, since "generaly unknown" is one of the "secrecy" pre-condition while "secrecy" itslef is one of three requirements for to information to be a "trade secret", it means that, if third party can easily through reverse engineering obtain potentially secret information – it is not secret, therefore it is considered as publicly available. Accordingly, from startup company point of view, if their product falls under these risks, then either potential product should be kept secret until it is patented, either inventors should take into account risks that after disclosing the product to public, secret information they had, will not provide such a competetive advantage against their competitiors anymore. Unfortunately, it follows that trade secrets embodied within marketed products would be ineligible for protection and that would significantly limit the range of information that is protected by trade secrets.[143]

"The use without restrictions of trade secrets obtained through reverse engineering appears problematic, in particular in sectors where no intellectual property protection is available, although considerable investments are made in the development of new products."[144] This is problematic also in case company has not obtained patent protection yet but market demands disclosure of particularr products. "The unrestricted use of such know-how raises concerns that it could pose a substantial threat to the companies concerned, eventually leading to market failure whereby such goods would no longer be produced. Accordingly, it must be assessed whether the existing (quite problematic) prohibition on

[141] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018

[142] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 90

[143] Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, p. 11

[144] Roland Knaak, Annette Kur, Reto M. Hilty, Comments of the Max Planck institute for innovations and competition of 3 June 2014, on the proposal of the European Commission for a Directive on the protection of undisclosed know-how and business information (trade secrets) against their ulawful acquisition, use and disclosure of 28 November 2013, COM (2013) 813, Final, Maxx Planck institute for innovation and competition Research paper series, No. 14-11, p. 11

advertising such products as imitations or replicas should be replaced by other measures that are directly aimed at protecting the relevant interests."[145] These concerns are reasonable. Also in Trade Secrets Directive recital is noted that "in some industry sectors, where creators and innovators cannot benefit from exclusive rights and where innovation has traditionally relied upon trade secrets, products can nowadays be easily reverse-engineered once in the market. In such cases, those creators and innovators can be victims of practices such as parasitic copying or slavish imitations that free-ride on their reputation and innovation efforts. Some national laws dealing with unfair competition address those practices. While this Directive does not aim to reform or harmonise the law on unfair competition in general, it would be appropriate that the Commission carefully examine the need for Union action in that area."[146] Even schoolars as well as authorities acknowledges the problem, undeniably, if such a particularization will be adopted, it will be extremely hard to prove such a "parasitic copying." Therefore, no matter what the reasons are, for the time being EU authorities has left this issue unsettled and at least for some time this will remain as it is.

However, "on the other hand, public sale or display of a product does not necessarily preclude trade secret status for components thereof where it would be difficult, costly, or time cosuming to extract the information by reverse engineering, nor limited public sale or display of a product destroy trade secret status if competitors are denied a reasonable opportunity for inspection and analysis of the information."[147] Preferentially that courts would have to adopt a more nuanced interpretation of the definition of trade secrets in relation to reverse engineering. It is suggested by Tanya Aplin that this interpretation should be as follows: "Where information is readily ascertainable from a simple inspection of a product, such that little or no reverse engineering is in fact needed, then the information will be "readily accessible" and not secret. However, in situations where the information is capable of being ascertained by virtue of reverse engineering (but has not been so obtained) then the information is not "readily accessible" and remains secret. In the circumstances where a product has in fact been reverse engineered, where the acquired information has not been

[145] Roland Knaak, Annette Kur, Reto M. Hilty, Comments of the Max Planck institute for innovations and competition of 3 June 2014, on the proposal of the European Commission for a Directive on the protection of undisclosed know-how and business information (trade secrets) against their ulawful acquisition, use and disclosure of 28 November 2013, COM (2013) 813, Final, Maxx Planck institute for innovation and competition Research paper series, No. 14-11, p. 11

[146] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018

[147] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 91

circulated "to persons within the circles that normally deal with the kind of information in question", then the information should still be protected."[148]

"Another issue that will arise is whether the competitor who has reverse engineered, but not circulated the information acquired from that process, can claim to be a "trade secret holder" and enforce protection in that same information. But where the information has been circulated to persons within the relevant circles, then the conclusion should be that there is no longer information capable of protection as a 'trade secret."[149]

Whenever secret information is obtained through reverse engineering, it looses its secrecy. But question arises, whether it is equitable when reverse engineering is established by competitors and investing significant amount of money in that? Even risks are known and EU authorities are aware of possible unfair reverse engineering, legislator at least for now has left this issue unsettled. Somehow it is understandable since it could be very complicated to prove that trade secret has obtained through proffessional reversen engineering by conducting new R&D process. Accordingly even Trade Secrets Directive provides various provisions which will beneficial for startups in their trade secrets protection this is one of legal shortcomings which startup companies will have to assess when choosing most appropriate strategy for protection of their innovations. Thus for startups only two legal ways are left – either keep information secret until it is patented either disclose information to the public and get into competition run with other market participants. The latter anyhow is only way in case information does not fulfill requirements set out in patent regulations.

But caution has been sounded to make sure that a product which is to be reverse-engineered is bought on the open market and not acquired with any restrictions.[150] Actually this is one of the most proper ways in order to protect secret information which is easy reverse engineered. Thus one of the companies first steps is to provide potential partners and customer with their startup product without any fee. And there are several reasons for that. Firstly, company gets feedback regarding potential shortcomings and necessary improvenemts. Secondly, in a such a way company might obtain potential customers since in the era of saturated market supply circumstances for customers is complicated to assess quality and suitability of every new product. Therefore every new offer is always considered carefulley with reasonable prudence. Also Trade Secrets Directive provides that reverse engineering is prohibited when it is cotractually agree by the parties. Thus parties who are

[148] Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, p. 11
[149] Ibid, p. 12
[150] Aleksei Kelli; Tonis Mets; Heiki Pisuke; Elise Vasamae, Trade Secrets in the Intellectual Property Strategies of Entrepreneurs: The Estonian Experience, 35 Rev. Cent. & E. Eur. L. 315 (2010)

bounded by valid agreement cannot obtain secret information through reverse engineering. [151] That will considered as an unlawfull acquisition. In fact this rule saves startup companies since at the early stage of development it is cheaper and more effective to outsource various services.

Unlawfull acquisition under the guise of employee protection

One of the most complicated issues in relation to the Trade Secrets Directive is risks which might arises from unlawfull acquisition, use of disclousure of trade secret by employees. Usually startup companies at the very early stage of development does not have much employees and companies only human resource consists of inventors who are management, lawyer, financist, etc. in one person at the same time. However sooner or later company will be forced to hire additional personall. There has been lot of discussions to what extent employers are allowed to restrict their existing and former employees? What is the boardline when employee restriction by company is justified and when employees fundamental rights, such as freedom to work is breached? Further below are analysed both issues.

Trade Secrets Directive prohibits restricting the mobility of employees. It is in particular in relation to the information which is not considered as trade secrets. Also limiting employees' to use of experience and skills they acquired in the normal course of their employment is forbidden. In addition the Directive prohibits imposing any additional restrictions on employees in their employment contracts other than restrictions imposed in accordance with EU or national law. Nevertheless Trade Secrets Directive does not restricts concluding of non-competition agreements between employers and employees, in accordance with applicable law.[152] During R&D process most of the duties might be done by inventors or outsourced companies. Nevertheless, whenever company starts manufacturing or active phase, there will necessity for employees. Therefore from employers position arises, how to prevent unlawful disclosing of trade secrets which startup company holds. In relation to this, there is no specific measures and they are the same legal tools using in the whole labour market – confidentiality clause and non-compete agreement. The only difference is that risks

[151] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018
[152] Ibid.

for startup company are significantly higher due to the extreme uncertainty in relation to innovative product.

"Properly worded assignment and nondisclosure agreement can be used to ensure that trade secrets developed by employees are assigned to the employer and that the employee remains obligated not to disclose such trade secrets or any other cofidential information received during the terms of his or her employment, after the employment relationship ends. However, the situation is far different in EU. Also while many coutries recognize the validity of nondisclosure agreements, scuh an agreement may be set aside if its effect is to unreasonably restrict the employee's right to choose his or her future occupation. Moreover, certain countries provide that an employee's right to seek new employment includes the right to make use of business information learned during the course of his or her prior employment.[153]

One of the most interesting issues in the trade secret field involves the relationship between knowledge gained by an employee in the ordinary course of practicing a trade or profession, and the proprietary information of an employer. In the archetypal Silicon Valley case, an employees has worked for several years at a semiconductor producing company, and leaves work for another company in the same business. During his work for the first employer, the employee may have learned a great deal about producing semiconductors, and this knowledge will almoust certainly make that employee more valuable to the second employer. The employee will gave signed a confidentiality agreement with the first employer, but it is impracticable for the employee to to surrender the useful knowledge he has gained. Some of that knowledge would be consider a trade secert by the first employer. In Silicon Valley, at least, the courts have been reluctant to impose restraints on the free movement of workers and have generally required the showing of a specific act of misapproproation of an industrial secret – such as the taking of important documents – before imposing liability on an employee, or his or her new employer. It is often noted that the free movement of highly sklilled worker in Silicon Valley is one of the engines of the success of that region.[154]

"Confidentiality clauses seek to identify, clarify or extend the information classified as a trade secrets, and introduce express legal obligations for employees in relation to them during employment and after termination. Such clauses can be effective where the firm has clearly identifiable secrets at the time of engagement, the details of which can be

[153] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 412

[154] Frederick Abbott, Thomas Cottier, Francis Gurry, The International Intellectual property system: Commentary and Materials, Part One, Kluwer Law international, Hague, Netherlands, 1999, p. 217-218

particularized in the contract of employment or a separate deed. However, choosing abstract terms (the trade secrets, confidential information etc.) as contractual description does little to relieve the difficulties described above properly identifying trade secrets, and distinguishing the from free know-how or public domain information. A further problem with abstract descriptors is that they may be so broad as to amount to an illegal and unenforceable restraint of trade or competition, because they tend to cover the use of an employee's ordinary stock knowledge.[155] Yet, despite the fact that this way of resolving the conflict seems in theory to present some clarity, it nevertheless raises some important issues when, in practice, it comes to drawing a distinction between what should be considered as a trade secret and what should be part of the skills gained by an employee.[156]

Another legal tool which empolyer might choose in order to protect their trade secrets are non-competition restrictions. In some cases, courts supplement the prohibitation against an employee's future us of misappropriated trade secrets by placing restrictions on the employee's ability to engage in certain types of competitive employmetn. To obtain an injunction relating to future employment, the plaintiff must show that the employee's work in specific position poses an inherent threat of disclosure of the secret or that it is inevitable that the employe will disclose the trade secret while engaged in work for a competitor.[157]

Courts are generally on guard against actions which intend to do no more than prevent competition by former employees by invoking protection of trade secrets. In most jurisdictions this will require the court at some point draw a line between trade secrets which belong to the firm and general knowledge, know-how and experience any employee unavoidably accumulates since information is seamless and interconnected, and what is learned cannot be unlearned, this is often a difficult task.[158]

A significant principle is that a non-compete clause will not be enforced if there is no valid interest to protect – an interest going beyond mere protection against competition. The two most significant valid interests recognized universally are the securing of genuine trade

[155] William Van Caenegam, Trade secrets and intellectual property. Breach of Confidence, Misappropriation and Unfair Competition,2014, Kluwer Law international, p. 202-203
[156] Jean Lapousterle, Christophe Geiger, Norbert Olszak, Luc Desaunettes, Legislative Comment What protection for trade secrets in the European Union? A comment on the Directive proposal, E.I.P.R. 2016, 38(5)
[157] Cohen, J., Gutterman, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998, p. 221
[158] William Van Caenegam, Trade secrets and intellectual property. Breach of Confidence, Misappropriation and Unfair Competition,2014, Kluwer Law international, p. 198

secrets and "client connection", although so-called stability of the workforce is also an acceptable reason to enforce reasonably adapted restraints in most jurisdictions.[159]

Of course, willingness to enforce non-competes only in case where there are real trade secrets to protect is in some way surprising, because such a case former employer could in any case rely on the default law of trade secrets. Implicit in the enforceability is recognition of some of the difficulties an employer faces with such actions. It also reflects the fact that there is a penumbra of information, perhaps not strictly a trade secret, for which an employer is arguably entitled to protection if he has taken care to provide for it contractually by way of a non-compete.[160] When considering no-competes policy the interests of employers in their trade secrets are already protected by way of the general law of trade secrets. Non-competes are, therefore, an additional tool in the armory of the employer. This fact reinforces the argument that strict adherence to principles intended to safeguard the public interests in the free competition and communication remains crucially important.[161]

Conditions of validity of confidentiality and non-compete clauses have not been harmonised in Europe. At the same time, workers also benefit from freedom of employment, which should be preserved and which constitutes an important factor for innovation whose promotion is the stated purpose of the directive.[162] As some commentators have observed, the Council seems to leave it up to the Member States to regulate the post-employment contract phases and to provide a legal framework for the recourse to confidentiality clauses and non-compete agreements, proving the absence of harmonisation on an issue of considerable practical significance.[163]

Trade Secrets Directive provides protection for mobility of workers. However from a startup protection such a protection might cause the risks that employees leaves the company and either establishes their own company, either joins competitors.

[159] William Van Caenegam, Trade secrets and intellectual property. Breach of Confidence, Misappropriation and Unfair Competition,2014, Kluwer Law international, p. 204
[160] Ibid, p. 204-205
[161] Ibid, p. 217
[162] Jean Lapousterle, Christophe Geiger, Norbert Olszak, Luc Desaunettes, Legislative Comment What protection for trade secrets in the European Union? A comment on the Directive proposal, E.I.P.R. 2016, 38(5)
[163] Ibid.

Potentialy unlawfull acquisition of information under the guise of freedom of expression

"While Trade Secrets Directive provides for measures and remedies which can consist of preventing the disclosure of information in order to protect the confidentiality of trade secrets, it is essential that the exercise of the right to freedom of expression and information which encompasses media freedom and pluralism, as reflected in Article 11 of the Charter of Fundamental Rights of the European Union, not be restricted, in particular with regard to investigative journalism and the protection of journalistic sources.[164] Therefore the Trade Secrets Directive exculdes the exercise of the right to freedom of expression and information as set out in the Charter of Fundamental Rights of the European Union, including respect for the freedom and pluralism of the media.[165] Moreover, as Trade Secrets Directive provides that exercising the right to freedom of expression and information as set out in the Charter, including respect for the freedom and pluralism of the media is considered as one of the four exception when acquiring, using and disclosing information is not considered as unlawful action.[166]

There is no doubts that freedom of expression in narrow sense and Charter of Fundamental Rights of the European Union[167] in a broader sense meaning is one of the fundamental cornerstones of the EU value system. However in authors opinion emphasizing its significance within Trade Secrets Directive text and legalizing acquisition, use and disclosure of secret information under the guise of freedom of expressions from economical viewpoint should be assessed criticaly. That said, EU has a strict rules in relation of environmental law, labor law, health law etc. Accordingly, EU as such and each Member states seperately has established governmental istitutions whoes main task supervise enterpreneurs, prevent possible infringements and penalize them in case violation of law occurs. Therefore author sees significant risks that journalists or researchers might try to obtain secret information according to their subjective understanding what possiblly could be breached thus public interests might be injured. In lawful society these rights to determin and decide what is legal or illegal should remain in hand of govenrmental authorities. Otherwise that might cause misuse of such a protection. From startup company economical point of view loosing trade secret might destroy their potential profit and business perspective only because

[164] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018
[165] Ibid.
[166] Ibid.
[167] CHARTER OF FUNDAMENTAL RIGHTS OF THE EUROPEAN UNION Charter of Fundamental rights of the European Union, (2000/C 364/01) OJEU, C 364/1

certain group has considered that to some extent their product or project as such might injure public interestes.

To summarise, the aforementioned provisions of the Proposed Directive seem to respect freedom of expression and are in line with the body of case law developed by the European Court of Human Rights. In this regard, the complaint that the proposed text would present some dangers because the illicit nature of the divulgation could only be appreciated ex post seems somewhat excessive. It must indeed be recalled that, in the hypothesis examined, the burden of proof of the unauthorised appropriation of the trade secret lies on the applicant. It is therefore legitimate that once this evidence is established, the burden of proof then shifts to the defendant, who must in turn demonstrate the public interest served by the revelation and its proportionality. Thus, a demonstration in the course of a trial, and therefore in front of a judge acting as a guarantor of individual rights and freedoms, necessarily intervenes afterwards, without having the effect of leaving the journalists and whistle-blowers unprotected.[168]

Whistleblowers

Continuing the topic of freedom of expression the Trade Secrets Directive provides that the measures, procedures and remedies provided for in this Directive should not restrict whistleblowing activity. Thus acquisition, use and disclosure of trade secrets for revealing misconduct, wrongdoing or illegal activity for the purpose of protecting the general public interest should not be restricted. Of course, simulary to journalists also whistle blowers bears burden of proof to justify their actions.[169]

Although directive contains provisions protecting whistleblowers, many non-governmental organistions and trade unions have argued that it does not go far enough in this regard. Misuse of trade secret under the directive does not include disclosure of trade secrets made in order to reveal "misconduct, wrongdoing or illegal activity" as long as those making such disclosures do so "for the purposes of protecting the general public interests". Many of those concerned with the rights of wihstleblowers argued that this is exception places the burden of proof on the disclosing party rather than those seeking to keep their information secret. Under this provision, whistleblowers may arguably fall out of the directive if they

[168] Jean Lapousterle, Christophe Geiger, Norbert Olszak, Luc Desaunettes, Legislative Comment What protection for trade secrets in the European Union? A comment on the Directive proposal, E.I.P.R. 2016, 38(5)
[169] Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018

cannot show that their intentions were to protect the general public interest. It remains to be sen whether trade secrets holders will pursue whistleblowers by arguing that disclosure were in fact motivated by commercial rather than moral considerations. As a result there is concern in some quarters that some would-be whistleblowers may be discouraged from revealing wrongdoing by the uncertainty of whether they will be able to prove that they did so for a proper purpose – and the risk of a damages award against them if they cannot.[170]

Of course, representatives of enterpreneurs had diametrically opposite view, considering this as risk for several reasons. Firstly, the same like journalists, each whistleblower has different scale of value, understanding of statutory law and attitude towards various social events. Therefore, there might be a risk that whistleblowers action may disclosue information thus causing damages for company even it occurs that company has nothing breached. In such situation company is suffering losses or even business as such. Secondly, competitors might under the guise of innocent whistleblowers acquire information in order to obtain competetive advantage. For instance, if information is potentially patentable, competitors gets this information and submitts it as patent thus preventing using this information by others, including original trade secet holder as well.

Also in authors opinion EU authorities has left loop hole in regarding three ways how to breach secrecy under this Directive – acquire, use and disclouse. As it was mentinoned above in this paper, it is not obligatory that all these three steps occures. Therefore whenever each of these actions occurs, it is violation of law. Thus if the aim is to protect public interests, the question arises - for what purposes whistle blower will use secret information? In authors opinion whistleblowers as well as journalists are able to acquire and disclose, but not use the information. Assumably, legislator simply did not pay attention to such a details.

Under this sub-chapter author assessed main disadvantages of Trade Secrets Directive from a business perspective, in particular startup company perspective. Firstly, the Directive allows reverse –engineering. It is not something new, since trade secrets is not a property in a classical manner it might be that in a public does not know that it even exists. However, from startup company perspective this cause risks, especially if startup product is easily reverse engineered thus used and even patented afterwards. From this perspective startup companies rather should choose patents as an most appropriate protecting measure. Second possible disadvantage is employee protection against possible complaints regarding acquisition, use

[170] Sarah Turner, Matthew Ives, Protecting trade secrets but suppressing whistleblowers? July 2016, Available on: https://www.intellectualpropertymagazine.com/patent/protecting-trade-secrets-but-suppressing-whistleblowers-118109.htm, accessed 04.04.2018

disclosure of trade secrets. Trade Secrets Directive has left Member states freedom of choice to use other legal tools such as confidentiality clause and non-compete clause for trade secret protection. However, courts are very cautious determining equality borderline. And the third disadvantage from business perspective is protection of freedom of speech and whistleblowers. Author did not questioned or chalanged these fundamental rights as such but rather assessed possible risks which from a business perspective might contribute unlawfull acquisition, use and disclosure of trade secrets under the guise of these fundamental rights. The reason for these concerns is fact that in these case rather subjective than objective aspects has essential impact on the outcome. Moreover risks related malicious behaviour and dishonest commercial practice also increases significantly.

CONCLUSIONS

Startups are companies that has created potentially highly profitable and innovative product, technology, service etc. However, development of startup companies is also related to extreme uncertainty. And only coincidence of circumstances, such as successful R&D process, appropriate financial support will deliver startup product to the market and generate income. However, alongside with financial support, also legal support is highly significant, especially when it comes to potentially patentable information. Considering that every patent at the early stage of the development is trade secret, it is highly important to provide sufficient legal protection for protection of trade secret information. Therefore, in order to settle and prevent lack of a common legal framework and uniform definition of "trade secrets" within the EU, in 2016 EU adopted Trade Secrets Directive. One of the purposes was to protect highly potential innvations and enterpreneurs which holds them.

Taking above mentioned into account thesis research was to analyze and assess suitabilitity of Trade Secrets Directive for potentially patentable information from perspective of startup company. It should be emphasized that assesment was provided only from business perspective. Analysis and assessment was provided mainly by answering the following questions:

1) What are advantages of the Trade Secrets Directive that could encourage startup companies to use trade secret as an alternative strategic legal tool of protection of potentially patentable information?
2) What are the possible shortcomings of the Trade Secrets Directive that could deter startup companies from using trade secrets as an alternative to protect potentially patentable information?
3) How will the Trade Secrets Directive affect the startup company strategy for protection of their potentially patentable information?

By answering the first question further below are listed three most important advantages which Trade Secrets Directive provides:

- Trade Secrets Directive provides unitary regulation within EU thus contributing common legal approach regarding trade secrets protection. Accordingly that will also promote exhange of information, transborder transactions within internal market. In addition common legal framework also will be more attractive for cross border investments into startup companies that has high potential but unfortunatelly local market for some reason is not able or willing to provide necessary investment.

- Definition of trade secrets provides minimum requirements which should be fulfileld in order to consider information as a trade secret. These pre-conditions are: a) secrecy which determines that information cannot be generraly known; b) Commercial value – even broad term, it is prescribed that trade secret information it must have at least some competetive advantage comparing to the competitors; c) reasonable steps to protect information. Even to some some extent wide and hard to assess, trade secrets definition provides startup (not only) companies with clear "rules of the game" – what should be done to protect valuable information as trade secret;
- Remedies set out in the Trade Secrets Directive will serve as important tool for trade secret protection which provides possiblity for precautionary measures such as confidentiality requirements and injunctive relief. One of the reasons why injured party usually is concerned before going to the court is high possibility that secret information might become publicly available to third parties thus secrecy could be lost. Accordingly, no matter what court rulling will be, injured party will never restore secrecy of the disclosed information. From startup company perspective this is crucial since in case of worse scenario startup project as such could be considered as failed. Therefore preacautionary measures stipulated in the text of the Trade Secrets Directive should be assessd as the main advantage for trade secret protection. It should be also emphaisezed that actually trade secret holders does not seek to cover damages as much as to prevent disclosing secret information to the public, since due to the intangible nature of the trade secrets, whenever information is publicily available, secrecy is lost.

Secondly, by answering to the second question further below are listed main disadvantages from a startup company perspective provided by Trade Secrets Directive:

- According to the Trade Secrets Directive every third party might lawfully acquire, use and disclose information which is obtained through reverse engineering. Even this is has never been prohibited, from startup company perspective this cause significant risks of loosing valuable secret information. Unfortunately the Directive does not regulate situations of so called "parasytic copying" competitors and other market players. Therefore, considering these circumstances, startup company either should hold out until the product is patented (if product is patentable), either assess possible profit or looses and enter into market being aware of full competition by other market players. Needless to emhasize that this may hinder potential innovative product diclosure to the public.

- Trade Secret particulary emphasize free movement of workers. The Directive also protects worker's and their representatives to information. This is However positive apsect is that EU authorities has left possibility to sign other contracts, such as confidentiality agreements and non-compete agreements. Of course if such an agreements are valid according to the national law and EU law as well as equality rights are respected.
- Trade Secrets Directive also provides protection for journalists and whistlblowers particulary reffering to the freedom of expression. However, even burden of proof is also binding to ther journalists, researchers and whistleblowers, certain concerns arises. Firstly, freedom of expression is protected by Charter of fundamental rights of the EU which in EU legislation hierarchy is higher than the Directive. Secondly, journalists and whistleblowers under the guise of freedom of speech may be used by competitors for dishonest purposes. Finally, for noble goals simply by protecting public rights journalist or whistleblowers might accidently disclose secret information.

Even wording of the Trade Secrets Directive is wide and unclear. Despite the fact that some provisions are unclear and obviusly also adversely for startup companies, regulation related to the protection of the trade secrets is to be considered as highly appreciated. Actually the main goal of having particular trade secrets regulation is not to keep it secret but rather desire to disclose and share information. Presumably information has been kept secret trying to prevent its unlawfull acquisition by the competitors. Accordingly investors does not know anything about particular innovation thus both parties – secret holder and investor loses potential profit. Considering above mentioned and keeping in mind potentiall risks which might occure, Trade Secrets Directive further should usefull tool for potentially patentable information protection, at least until the moment when it is patented.

BIBLIOGRAPHY

Books

1. Corea M. Carlos, Trade Related Aspects of Intellectual Property Rights: A Commentary on the TRIPS Agreement, Oxford University press, 2007
2. Gutterman, Cohen, A.S., Trade Secrets protection and exploitation, The Bureau of National affairs, Washington, 1998
3. Burgess, Cristopher, Power, Richard, Secrets Stolen, Fortunes lost. Preventing intellectual property theft and economic espionage in the 21st century, Syngress Publishing, 2008, 357 pages
4. Butler, David, Business planning for new venture. A guide for start-ups and new innovations, 2014, Routledge, New York, 273 pages
5. Ries, Eric, A Lean Startup. How today's enterpreneurs use continuos innovation to create radically successful businesses, 2011, Crown Business, New York, 320 pages
6. Abbott, Frederick, Cottier, Thomas, Gurry, Francis, The International Intellectual property system: Commentary and Materials, Part One, Kluwer Law international, Hague, Netherlands, 1999
7. De Carvalho, Nuno Pires, The TRIPS regime of patent rights 3rd edition, Kluwer law international 2010
8. Pila, Justine, Torremans, Paul, European Intellectual property law, Oxford university press, 2016
9. Bently, Lionel, Sherman, Brad Intellectuall Property Law, 4th edition, Oxford university press, 2014
10. Szycher, Michael, Commercialization Secrets for Scientists and Engineers, 2016, first edition, CRC Press, Available on: Taylor&Francis.com 558 pages
11. Bianchi, Patrizio, Labory, Sandrine, The economcial importance of intangible assets, Routledge, New York, 2004
12. Securing Intellectual Property. Protecting Trade Secrets and Other Information Assets, Butterworth-Heineman, 2009
13. Van Caenegam, William, Trade secrets and intellectual property. Breach of Confidence, Misappropriation and Unfair Competition,2014, Kluwer Law international, 258 pages
14. Gilbert, Jill, The enterpreneur's guide to patents, copyrights, trademarks, trade secrets and licensing, 2004, A Berkley Books, New York, p. 323 pages

Articles

1. Aidin Salamzadeh, Hiroko Kawamorita Kesim, Startup Companies: Life Cycle and Challenges, 2015, 4th International Conference on Employment, Education and Entrepreneurship (EEE), Belgrade, Serbia, 2015, Available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2628861, accessed, 15.04.2018;
2. Aleksei Kelli; Tonis Mets; Heiki Pisuke; Elise Vasamae, Trade Secrets in the Intellectual Property Strategies of Entrepreneurs: The Estonian Experience, 35 Rev. Cent. & E. Eur. L. 315 (2010)
3. A. Arthur Schiller, Trade Secrets and the Roman Law, The Actio Servi Corrupti, 1930, 30 Colum. L. Rev., p. 837 – 845
4. Jean Lapousterle, Christophe Geiger, Norbert Olszak, Luc Desaunettes, Legislative Comment What protection for trade secrets in the European Union? A comment on the Directive proposal, E.I.P.R. 2016, 38(5), 255-261
5. Roland Knaak, Annette Kur, Reto M. Hilty, Comments of the Max Planck institute for innovations and competition of 3 June 2014, on the proposal of the European Commission for a Directive on the protection of undisclosed know-how and business information (trade secrets) against their ulawful acquisition, use and disclosure of 28 November 2013, COM (2013) 813, Final, Maxx Planck institute for innovation and competition Research paper series, No. 14-11
6. Sarah Turner, Matthew Ives, Protecting trade secrets but suppressing whistleblowers? some country-specific trade secret laws have proved unfit for purpose but, will the new EU directive be any better? Intellectual Property Magazine, July 2016, pages 38-39
7. Tanya Aplin, A critical evaluation of the proposed EU trade secrets directive, Dickson Poon School of Law, King's College London, 2014, 48 pages
8. Thomas Farkas, Peter Koch, The disclosure–fair trial dilemma when enforcing trade secrets in civil court proceedings Volume 11, Issue 12, december 2016, pages 901–909

Policy documents

1. Baker & Mackenzie,Study on trade secrets and confidential business information in the internal market, Final study, April 2013, prepared for European Commission Contract number: MARKT/2011/128/D, available on: http://ec.europa.eu/internal_market/iprenforcement/docs/trade-secrets/130711_final-study_en.pdf , accessed 03.03.2018

2. Commission starff working document, impact assessment, Accompanying the document. Proposal for a Directive of the European Parliament and of the Council on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, unse and disclosure. EU Commission, Brussels, 28.11.2013 SWD (2013) 471 final, Available on: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013SC0471, accessed 09.05.2018
3. European Innovation Council pilot, EU commission official home page, Available on: https://ec.europa.eu/info/news/european-innovation-council-pilot-support-257-smes-eu13-million-2018-apr-05_en, accessed 05.05.2018.
4. What is an SME? EU Commission official home page, Available on: http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_lv, accessed on 04.05.2018.

Website

5. Domenico Piero Muscillo, Trade secrets in Italy: the current Italian legislative situation, 2018, available on: https://www.dandi.media/en/2018/03/trade-secrets-in-italy/, accessed 07.05.2018
1. James Pooley, Trade Secrets. The other IP rights, WIPO Magazine, June 2013, Available on: http://www.wipo.int/wipo_magazine/en/2013/03/article_0001.html, accessed 24.04.2018
2. James Hill, Trade secrets, Unjust enrichment and the classifiaction of obligations, 4 Virginia Journal of law and technology 2, 1999, Availabnle on: http://vjolt.org/wp content/uploads/2017/Articles/vol4/issue/home_art2.html,
3. Natalie Robehmed, What is startup? 2013, Available on: https://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/#513a69924044, accessed: 15.04.2018
4. Steve Blank, Why the lean startup changes everything,, 2013 may issue of Harward Bussines review, Available on: https://hbr.org/2013/05/why-the-lean-start-up-changes-everything accessed, 15.04.2018
5. Summary of the Paris Convention for the protection of Industrial Property (1883), WIPO official website, Available on: http://www.wipo.int/treaties/en/ip/paris/summary_paris.html, accessed 23.03.2018
6. Tobias Kollmann, Christoph Stöckmann, Simon Hensellek, Julia Kensbock, European startup monitor 2016, European Startup monitor, 112 pages.

International and EU Legislation

1. Agreement on Trade-related aspects of intellectual property rights, 1994, World Trade Organization, Available on: https://www.wto.org/english/docs_e/legal_e/27-trips.pdf, accessed 27.04.2018
2. Charter of Fundamental rights of the European Union, (2000/C 364/01) OJEU, C 364/1
3. Convention on the Grant of European Patents (European Patent Convention), European Patent Office, 2016, Available on: http://documents.epo.org/projects/babylon/eponet.nsf/0/029F2DA107DD667FC125825F005311DA/$File/EPC_16th_edition_2016_en.pdf, accessed 05.05.2018
4. Directive 2016/943 of European Parliament and of the Council (EU) of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (Text with EEA relevance), OJEU L157/1, 15.06.2016, Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN, accessed 26.04.2018
5. Commission recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (notified under document number C(2003) 1422) (Text with EEA relevance) (2003/361/EC), 2003, OJEU, L 124/36
6. PCT fee table, 2018, WIPO official home page, Available on: http://www.wipo.int/export/sites/www/pct/en/fees.pdf, accessed 23.04.2018
7. Patent Cooperation Treaty, International treaty, Washington, 1970, Available on: http://www.wipo.int/pct/en/texts/articles/atoc.html, accessed 03.05.2018
8. Rules relating to Fees of 20 October 1977 as adopted by decision of the Administrative Council of the European Patent Organisation of 7 December 2006 and as last amended by decision of the Administrative Council of 13 December 2017, THE ADMINISTRATIVE COUNCIL OF THE EUROPEAN PATENT ORGANISATION, 2018, Supplementary publication 2 – OJ EPO

Legislation of the United States of America

1. Defend Trade Secrets Act, USA, 2016, Available on: https://www.congress.gov/bill/114th-congress/senate-bill/1890/text, accessed 02.05.2018

Legislation of the Republic of Latvia

1.Jaunuzņēmumu darbības atbalsta likums (Law on aid for the activities of start-up companies), Latvian law, adopted on 23.01.2016, in force on 01.01.2017, Published: Latvijas Vēstnesis 241 (5183), 10.12.2016

2. Komerclikums (The Commercial law of Latvia), Adopted in 13.04.2000, published: "Latvijas Vēstnesis", 158/160 (2069/2071)