Is Equity Crowdfunding for you?

--An assessment tool for high-tech start-up entrepreneurs & recommendations to platforms

Master's thesis
MSc. Management of Technology
Faculty of Technology, Policy and Management
Delft University of Technology

June 2017

Author:
Hang Li
4409043

Graduation Committee:

Dr. Robert Verburg	Chairman
Dr. Zenlin Roosenboom-Kwee	1st supervisor
Dr. Michel Oey	2nd supervisor
Dr. Aad Correljé	Additional 2nd supervisor

This page is intentionally left blank

Executive Summary

Many start-ups face difficulty raising sufficient funds at the early stage of their businesses. Traditionally, entrepreneurs raise capital from friends and family, angel investment, venture capital or bank loans. However, with the development of Internet platforms, alternative finance methods have arisen. Entrepreneurs are starting to look for financial help from crowdfunding platforms, at the same time, more people from the general public with extra money starting to invest on crowdfunding websites.

This research focuses on equity crowdfunding, an emerging entrepreneurial finance alternative. Equity crowdfunding has only existed since 2011 in Europe. There is limited research about equity crowdfunding worldwide, let alone research about crowdfunding in the Netherlands. Based on the "lemon market" theory from Akerlof (1970), information asymmetry would harm the market and lead to market shrink or even failure. This research is intended to reduce information asymmetry in equity crowdfunding ecosystem, in an aim to promote equity crowdfunding in the Netherlands.

There are two types of information asymmetry being mitigated in this research. The information asymmetry between entrepreneurs and investors can be mitigated by an assessment tool. The assessment tool was developed by first compiling 11 success factors of equity crowdfunding from 5 key literature sources. Then a selection of success factors was discussed before a draft assessment tool is developed. This draft assessment tool is validated later by entrepreneurs using a semi-structured interview approach. The assessment tool is meant for entrepreneurs in the Netherlands in the high-tech industry to pre-screen or evaluate them whether equity crowdfunding can be considered as an alternative funding during their seed-stage financing. This assessment tool can present a fast insight to show start-ups how to raise money successfully on an equity crowdfunding campaign. Hence, it helps entrepreneurs make efficient decisions whether equity crowdfunding can be considered as a source of financing. The assessment tool can also pinpoint their weaknesses if they are going to participate in an equity crowdfunding campaign. By raising the awareness of equity crowdfunding among entrepreneurs, it is possible to provide them with one more option (equity crowdfunding) in their seed-stage fundraising strategy.

The information asymmetry between entrepreneurs and platforms can be mitigated by collecting recommendations to platforms. There are two sources of recommendations. One is from entrepreneurs' point of view by semi-structured interviews. The other one is from second hand information collected to learn from the market leader the UK.

Equity crowdfunding platforms in the UK have evolved with new operations compared to the Netherlands. One is **lead investor** system whereby the lead investor serves as an experienced investor who can conduct

due diligence on behalf of rest of investors from the crowd, but also lead investor attracts followers to invest because of his/her reputation in the field. Under this system, the success rate of campaigns goes up to more than 72%, while platforms without lead investor mechanism is about 55%. Another trend is **unified nominee structure**, which is the "funds" function by Seedrs. So investors can invest to equity crowdfunding campaigns, convertible loans, or funds. In the earlier two options, investors invest under their own identity to projects, which means entrepreneurs can have hundreds of small investors that they have to manage updates with. However, in the "funds" option, investors put money into a pool under the name of Seedrs. And Seedrs invest to different projects to leverage the risks for investors, acting as a portfolio manager in traditional banking. Also, entrepreneurs do not have to worry about managing hundreds of investors. All investment is under the unified nominee structure, which is under Seedrs name. This structure provides both sides convenience. This innovative trend is definitely worth borrowing by Netherlands platforms. Also, there is a difference of **operations on due diligence** between the UK platforms and the Netherlands platforms. The Netherlands platform Symbid perform due diligence after the campaign target is reached and before passing to the entrepreneur. While the UK platforms perform due diligence before listing a campaign online. This measurement results a rejection rate of 72% of projects. However, investors can expect better quality projects to invest. As a result, platforms act with more reputation would attract more investors.

To summarise recommendations from entrepreneurs to platforms, they think if the speed of fundraising were faster than formal investors (VC and angels), it would be more appealing to entrepreneurs. So the platform can be attract more entrepreneurs by shortening the fundraising cycle of equity crowdfunding. Also, if the platform can enable functions of "network and knowledge" to be provided by the crowd, it would attract more entrepreneurs, because all interviewees in the research think it is very important. "Network and knowledge" are the most repeated key words when entrepreneurs answering the interview questions regarding their concerns in choosing equity crowdfunding. Not surprisingly, the most attractive part of traditional investors (VC and angels) is the value-added services. They can provide their network to boost the development of start-ups. They can also provide their knowledge or expertise in technical, managerial or strategic levels to help start-ups to expand as fast as possible. If those benefits entrepreneurs can acquire from the crowds on equity crowdfunding campaign, there will be more entrepreneurs to choose equity crowdfunding. One of the reasons why the equity crowdfunding in the UK market is much more developed than the one in the Netherlands market is that the equity crowdfunding platforms have been backed by venture capital or lead investors (angels). The collaboration between equity crowdfunding platforms and venture capital in the UK is the goal for the Netherlands to achieve. However, in the UK, there is more institutional investment money in looking for investment opportunities than the Netherlands. It might be a challenge for Netherlands equity crowdfunding platforms to seek collaboration with venture capitals, but there are advantages from government subsidies that are possible to collaborate with.

The hybrid financial instrument between equity crowdfunding and other sources is possible. Two possible applications are like this. 1) If the entrepreneur has reached the target of equity crowdfunding campaign, the government subsidy would be provided on top of the money raised on equity crowdfunding. So it doubled the investment originally it would acquire only from the crowd. 2) If the entrepreneur has reached the goal of equity crowdfunding, a bank loan under government incentives would be provided on top of this equity crowdfunding funding. In other words, entrepreneurs can exchange less equity for the same amount of money. However, on equity crowdfunding platforms, the innovative projects are limited. Future study can explore the feasibility of this suggestion. In the UK, the collaboration between VC and equity crowdfunding already exists. Venture capital start investing in start-ups via equity crowdfunding platforms. This has proved to be feasible in the UK. It can be possible in the Netherlands in the future as well, since from the regulation part, equity crowdfunding in the UK and in the Netherlands are similar.

With more actors (venture capital, angel investors, government subsidies) involved on equity crowdfunding platforms, not only the crowds, there would be a bigger cash pool to invest in campaigns. In return, it can attract more entrepreneurs to participate in equity crowdfunding platforms.
By reducing information asymmetry between the entrepreneurs and the platforms and the entrepreneurs and the investors, it would be possible to mitigate “lemon market” effect by Akerlof (1970) and lead to a more prosperous equity crowdfunding industry in the Netherlands.

Keywords: Crowdfunding, Crowdsourcing, Equity-based crowdfunding, start-ups, seed-stage financing, entrepreneurial financing, lemon market theory, information asymmetry, information cascade, herding, crowd wisdom

Acknowledgements

With the help of the thesis committee members, as well as the voluntary interviewees who prefer to be anonymous in this research, I am able to finish my Master's thesis during the period of January 2017 to June 2017.

Special thanks to my first supervisor Dr. Zenlin Roosenboom-Kwee, who provided me inspiration and feedback through out the entire process of the thesis. Zenlin has been very supportive and understanding about my struggles in academic life as well as in personal life. Without the guidance and encouragement of Zenlin for this research, I would not be able to explore and find topics I am interested in and be able to finish in time. I am very grateful to have Zenlin as my first supervisor. Also, I would like to thank Dr. Robert Verburg, the chairman of this research committee, for all the support from the very beginning of this research, such as arranging all committee members, until the very end of this research, such as scheduling the graduation meeting with the challenges of a conflicting schedule among all supervisors during the busy season of graduation. Additionally, I would like to thank Dr. Aad Correlje and Dr. Michel Oey for the valuable guidance and feedback to improve this research.

I would also like to thank the seven interviewees who prefer to remain anonymous in this research, but provide insightful ideas and thoughts on the funding strategies and their funding sources, including opinions about equity crowdfunding and how to improve this ecosystem.

Lastly, I would like to thank my family and friends for supporting me to finish this thesis research. Their emotional support and academic suggestions mean a lot to me.

Hang Li
June 2017
Delft

Table of Contents

List of Figures

List of Tables

1. Introduction

1.1 Research Background

One of the most well-known crowdfunding websites, Kickstarter, was launched in 2008. Since then, it has helped more than 126,000 projects to achieve their goals. According to the most recent statistics, Kickstarter has a success rate of 35.84% for all the campaigns and it has attracted more than 3 billion USD to support those projects (Kickstarter, 2017). Crowdfunding has become a new source of fundraising for start-ups or entrepreneurs, besides traditional funding sources such as venture capital, bank loans, or angel investment (Lambert & Schwienbacher, 2010). Also it has opened the door for the general public to invest in projects through online platforms, since the Internet and personal computers can be accessed easily in a modern society (Lambert & Schwienbacher, 2010).

The growth of crowdfunding worldwide is tremendous. According to Massolution (2015), one of the most comprehensive industry reports for the crowdfunding industry, the global volume of crowdfunding reached 2.7 billion USD in 2012, 6.1 billion USD in 2013, 16.2 billion USD in 2014. It estimated crowdfunding would reach 34.4 billion USD in 2015 worldwide. From the statistics above, it is fair to say crowdfunding has an increasingly important role in fundraising.

Reward-based crowdfunding is one type of crowdfunding. The most well-known reward-based crowdfunding websites are Kickstarter and Indiegogo, both founded in the US. Kickstarter was founded in 2008 and shortly after in 2009 Indiegogo was founded, which claims to be "the largest global crowdfunding" website (Indiegogo, 2016).

Research on crowdfunding has mostly focused on reward-based crowdfunding. Ordanini (2009) believes the concept of crowdfunding on the Internet can help entrepreneurs not only get funds, but also help entrepreneurs to pre-test whether their products will be well accepted by the public. At the same time, investors of crowdfunding not only play a role in providing funds to the entrepreneurs, but in judging the future popularity of this product from consumer's perspective at this pre-launch stage (Ordanini, 2009). So entrepreneurs who initiate campaigns can receive feedback from investors (backers) at an early stage and adjust or improve business ideas accordingly to be better prepared for the launch of the products (Hemer, 2011).

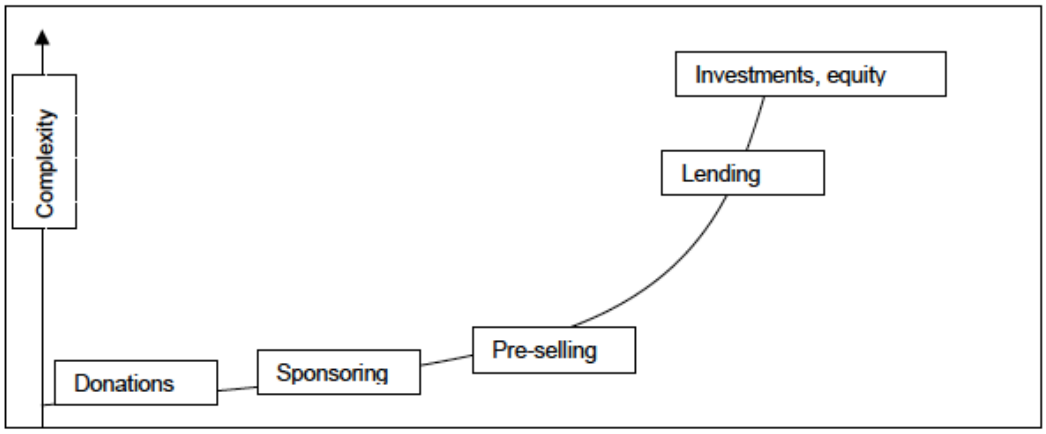

Figure 1. The major forms of capital provision ranked by process complexity (Hemer, 2011, p.9)

Equity crowdfunding also provides entrepreneurs the opportunity to pre-test their business ideas. However, it is the most complicated and risky crowdfunding model (Hemer, 2011). As shown in Figure 1 above, one of the earliest crowdfunding studies from Hemer (2011) identified different types of crowdfunding with different levels of complexity. Equity crowdfunding has the highest complexity level. Wilson & Testoni (2014) also believes the same that equity crowdfunding is the most complicated and risky crowdfunding model. De Buysere *et al.* (2012) believes that equity crowdfunding generally requires a minimum investment set up by each entrepreneur, so there are more risks for investors. In addition, this investment activity needs to be regulated, for example, what the requirements of founders and investors are. The study concludes that how to avoid or punish fraud with a big cash flow in equity crowdfunding are also concerns of legislation agencies. Harrison (2013) believes liabilities and benefits of crowdfunding platforms, founders and investors still need to be specified. Vulkan *et al.* (2016) stated the target of each campaign is also significantly bigger than other types of crowdfunding, so important issues like transparency of cash flow, security of information, operational procedures needs to be regulated to reduce risks of investors and entrepreneurs.

This helps to explain why equity crowdfunding is the newest type of crowdfunding to develop. In a lot of countries equity crowdfunding is not allowed. Even for the biggest crowdfunding market in the world, the US, equity crowdfunding was only recently legalised to open to non-accredited investors. Before JOBS Act (The Jumpstart Our Business Startups Act), only accredited investors were allowed to participate in equity crowdfunding. Even so, various studies still hold an optimistic opinion about equity crowdfunding's growth and they believe that equity crowdfunding will continually grow with a high ratio globally for many more years (Massolution, 2013; Kirby & Worner, 2014; Mssolution 2015; Cambridge Centre for Alternative Finance, 2016).

In this research, the definition of equity crowdfunding is based on Ahlers *et al.* (2015, p. 1) "Equity crowdfunding is a form of financing in which entrepreneurs make an open call to sell a specified amount of

equity or bond-like shares in a company on the Internet, hoping to attract a large group of investors". Further literature of equity crowdfunding can be found in Chapter 3.2 Equity Crowdfunding.

1.2 Problem Description

Many start-ups face difficulties in raising sufficient funds at the early stage of their businesses. Traditionally, entrepreneurs raise capital from friends and family, angel investment, venture capital or bank loans. However, with the development of Internet platforms, alternative finance methods start arising. Entrepreneurs start to look for financial help from crowdfunding platforms. Equity crowdfunding is booming in the UK. By far, the UK is the most leading market in the world. From 2014 to 2015, the UK grew from £84 million to £332 million in equity crowdfunding with a growth rate of 295%. The Netherlands had a much lower growth ratio compared to the UK with €11.16 million in 2014 and €17 million in 2015. In the context of Europe, the Netherlands is ranked the 3rd in equity crowdfunding behind France (€75 million) and Germany (€24 million) in 2015, excluding the UK. Why is equity crowdfunding industry grows so slow in the Netherlands compared to neighbouring countries?

According to the "Lemon market" theory (Akerlof, 1970), information asymmetry can lead to market shrink or eventually market failure. This theory discussed the information asymmetry and quality uncertainty in the second hand car market in United States. In his research, information asymmetry exists between sellers and buyers. Only sellers know the inside knowledge of their cars either good quality or bad quality; the buyers do not have the access of that information accurately since both the dealer and the seller want to make a deal from the buyer. Eventually, the information asymmetry would drag the second hand market full of "lemons", or low-quality goods, behind. Buyers are not sure about exact value of the second hand car, so they would only be willing to pay an average price for a used car including good-quality ones and bad-quality ones. This would result good-quality cars being crowded-out from the market, because those sellers are not willing to sell their cars for a lower price than the actual value. It would also result the number of buyers would go down, since they can only buy bad-quality cars in the second hand car market. As a result, due to the "adverse selection", the market will collapse eventually, because buyers would exit the market since there are only lemons left in the market This phenomenon is caused by information asymmetry and the reinforcement of positive feedback loop that only lemons will stay in the market. This theory appeals the danger of information asymmetry. It happens when different parties have different information. For a selling-buying situation, if the selling party has some information that the buying party does not have, and this information would influence the decision making for the buying party if they would have had this information, information asymmetry exists and brings harm to the buyers.

In the equity crowdfunding context, there is also information asymmetry between entrepreneurs and investors. Entrepreneurs set up campaigns on equity crowdfunding platforms and attract investors to reach their goals of fundraising. If the campaign is successful, both entrepreneurs would get the funding, and platforms would get the commission. It is very similar to the model of second car market. So based on Akerlof's "lemon market theory", it is logical to assume that low growth ratio of equity crowdfunding in the Netherlands is because of information asymmetry. By mitigating information asymmetry in the equity crowdfunding in the Netherlands between entrepreneurs and investors, it is possible to promote a healthy environment for investors. Hence, it is possible to reduce the gap between the Netherlands and neighbouring countries in equity crowdfunding.

In the domain of equity crowdfunding, the available literatures mostly discuss the potential of equity crowdfunding in the future in the economy (Ordanini *et al.* 2011; Massolution, 2012; Massolution, 2013; Gajda & Mason, 2013; Massolution, 2015; Kirby & Worner, 2014; Netherlands Crowdfunding Association, 2017), while there is not enough criticism and constructive suggestions to promote equity crowdfunding in the Netherlands. This research will focus on how to reduce information asymmetry and how to improve equity crowdfunding in the Netherlands.

1.3 Research Objective

Based on the underlying "lemon market" theory, the equity crowdfunding industry would shrink or fail if the information asymmetry exists between different parties in the ecosystem of equity crowdfunding.

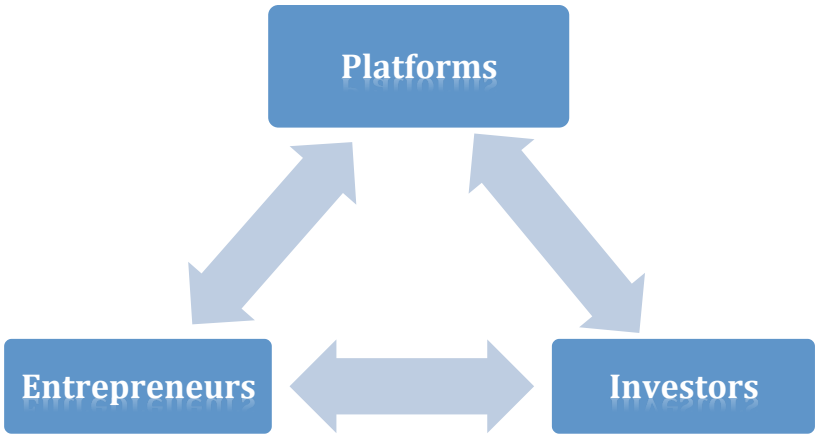

Figure 2 Information Asymmetry in Equity Crowdfunding. (Source: Author)

There are three major parties in an equity crowdfunding ecosystem. So there can be information asymmetry from both directions between parties. Since platforms as a media promote drastically to investors on their websites and educate investors how to invest, the information asymmetry is less severe between

platforms and investors. In this research, the main objectives are to mitigate information asymmetry as listed below.

1. This research aims to *reduce information asymmetry between entrepreneurs and platforms*. What are the reasons why platforms in the Netherlands cannot attract as many projects as the ones in the UK? What do entrepreneurs think of equity crowdfunding in the Netherlands? Why are Netherlands entrepreneurs hesitant to choose equity crowdfunding, while from the literature equity crowdfunding is growing steadily fast every year worldwide? So in other words, this research is aiming to provide constructive suggestions or recommendations to the equity crowdfunding platforms to improve the role of equity crowdfunding at seed-stage financing in the Netherlands.

2. Also, this research aims to *reduce information asymmetry between entrepreneurs and investors* by providing entrepreneurs success factors of an equity crowdfunding campaigns from investors' point of view. What signals do investors perceive as important to evaluate a campaign but entrepreneurs do not know? By answering this question, it can raise public awareness of equity crowdfunding among entrepreneurs who were originally not familiar with equity crowdfunding or hesitant to participate in equity crowdfunding campaigns.

By reducing information asymmetry in equity crowdfunding, this research aims eventually to promote equity crowdfunding industry in the Netherlands.

1.4 Research Questions

Based on the research background, problem descriptions and research objectives discussed in previous sections, the main research questions (RQ) of this research can be formulated as below:

Main RQ1: How to make equity crowdfunding more attractive to entrepreneurs?

Main RQ2: Considering equity crowdfunding as an alternative finance for entrepreneurs, what would an assessment tool look like for entrepreneurs in high-tech start-ups in the Netherlands to assess them whether equity crowdfunding can be considered in seed-stage financing?

To be able to break down the first main research question into pieces, the following sub questions are developed to tackle RQ1:

The main RQ1 is to understand from entrepreneurs point of view, how to motivate or encourage them to choose equity crowdfunding, since equity crowdfunding is a new alternative finance method, not necessarily every entrepreneur is familiar with it. Even if entrepreneurs are familiar with equity crowdfunding, not necessarily it is popular to choose by entrepreneurs. So this main research question need to find out whether entrepreneurs know about equity crowdfunding, and what they think about it, why do not they choose it, how to attract them to choose equity crowdfunding.

Since the scope of the research is in the Netherlands, it is important to know the current situation of equity crowdfunding in the Netherlands, and comparison with other countries in the Europe. Thus, the sub question is formulated:

1.1 How is Netherlands equity crowdfunding industry doing in the European context?

By answering this question, it is possible to know how big gap is between the Netherlands and neighbouring countries in equity crowdfunding.

1.2 What is the preference of seed-stage financing from an entrepreneurs point of view?

After getting to know an overview understanding of equity crowdfunding in the Netherlands in the European context, it is now important to know the preference of entrepreneurs when it comes to seed-stage financing. By understanding their preference, it is easier to angel where equity crowdfunding is ranked in their minds. Then it is possible to ask their hesitations and why they do not choose equity crowdfunding. However, this research is to find recommendations to improve equity crowdfunding, so only entrepreneurs who do not tend to choose equity crowdfunding are the right people to ask opinions from.

1.3 What are the concerns or deterrents from entrepreneurs to choose equity crowdfunding?

After understanding the concerns of entrepreneurs who are hesitant to choose equity crowdfunding as their seed-stage financing, the next sub question would be how to reduce those concerns and how to make equity crowdfunding platforms more attractive to entrepreneurs in the Netherlands from an entrepreneurs' point of view, since equity crowdfunding is still considered as an emerging phenomenon.

1.4 What are the recommendations from the entrepreneurs' point of view to improve equity crowdfunding to attract more projects?

The main RQ1 is to get ideas to make equity crowdfunding more appealing to entrepreneurs from their point of view. It can be recommendations from entrepreneurs on how platform should operate. Also, it can be certain functions entrepreneurs would like equity crowdfunding platforms to enable. For example, what types of investors are entrepreneurs interested to get and how should platforms accommodate entrepreneurs' expectations into their business model, or how a platform can make it more transparent to bring more trust between entrepreneurs and investors.

The main RQ2 is also trying to attract more entrepreneurs in a way by providing an assessment tool to entrepreneurs, so that they can evaluate themselves how big chance they can raise money through equity crowdfunding platforms. Because equity crowdfunding is so nascent that a lot of entrepreneurs may not be familiar with it. Maybe some of them do not choose equity crowdfunding because they are afraid to fail the campaign. If this assessment tool from this research can present to those entrepreneurs actually they are very likely to raise money successfully on equity crowdfunding platforms, they would be willing to participate in a campaign there. In other words, this tool is to bring more awareness of qualifications for raising money on equity crowdfunding platforms and to bring more entrepreneurs and projects to equity crowdfunding platforms that originally were hesitant to choose as their seed-stage financing.

To develop such an assessment tool, it is necessary to know success factors from all available literature to give entrepreneurs a glance of what qualifications would make a successful campaign. Then the next sub-question is formulated as below:

2.1 What are the success factors for equity crowdfunding campaigns?

The success factors and qualifications for entrepreneurs to have, would be answered from sub-question above, this self-evaluated assessment tool would include all success factors together and put scores accordingly to differentiate chances of raising money successfully on equity crowdfunding campaign.

2.2 What do entrepreneurs think about this assessment tool?

After having feedback from the assessment tool from entrepreneurs, the assessment tool would be improved with a final version as a deliverable for this Master's thesis research.

Summary of main research questions and sub-questions

The summary of all the main research question and sub questions, together with the methodology how each question is addressed, is listed in the table below.

	RQ summary	Methodology	Chapter
RQ 1	**1. How to make equity crowdfunding more attractive to entrepreneurs?**		
	1.1 How is Dutch equity crowdfunding industry doing in the European context?	Literature review	Cha 3
	1.2 What is the preference of seed-stage financing from an entrepreneurs point of view?	Interview	Cha 5
	1.3 What are the concerns and deterrents for entrepreneurs to choose equity crowdfunding?	Literature review + interview	Cha 3 + Cha 5
	1.4 What are the recommendations from the entrepreneurs' point of view to improve equity crowdfunding to attract more projects?	Interview	Cha 5
RQ 2	**2. Considering equity crowdfunding as an alternative finance for entrepreneurs, what would an assessment tool look like for entrepreneurs in high-tech start-ups in the Netherlands to assess by them whether equity crowdfunding can be considered in seed-stage financing?**		
	2.1 What are the success factors for equity crowdfunding campaigns?	Literature review + interview	Cha 4 + Cha 5
	2.2 What do entrepreneurs think about this assessment tool?	Interview	Cha 5

Table 1 Summary of main RQs and sub-questions. (Source: author)

1.5 Research Scope

Funding sources may vary depending on different sectors of businesses. To solve all the research questions listed in Chapter 1.4. It is important to specify the scope of this study, which is focused on equity crowdfunding *in the Netherlands*.

Since this Master's thesis is for the master program, MSc. Management of Technology, in TU Delft, the technological sector is closely related. The scope of this research is limited to **entrepreneurs in high-tech sector who are seeking external capital in seed-stage in the Netherlands but have *not* participated in equity crowdfunding campaigns**.

Also, there are not only entrepreneurs involved in an equity crowdfunding campaign. Platforms are also an essential party. Since the accessibility of the Internet is worldwide, everyone can raise money anywhere in the world. It is important to set the scope of **the platforms, which are the ones physically located in the Netherlands.**

1.6 Importance, Relevance and Contributions

1.6.1 Importance and relevance of this study

Limited research can be found to reduce information asymmetry in equity platforms and how to attract more entrepreneurs to participate. Most of the research only shed lights on how much growth every year of equity crowdfunding; what a bright future equity crowdfunding industry would be; what an important role can equity crowdfunding play in the economy. More critical literature discusses risks of equity crowdfunding and draws conclusion how regulations should be enhanced (Agrawal, Catalini, & Goldfarb, 2014). However, if equity crowdfunding platforms fail to attract good projects for investors to invest, platforms as business entities would fail to make. Thus, the platform can go bankrupt just like what happened in China, and eventually the equity crowdfunding industry would shrink or fail due to information asymmetry (Akerlof, 1970).

To avoid this situation happening and foster a healthy eco-system of equity crowdfunding industry in the Netherlands, this research sheds light on how to reduce information asymmetry in the ecosystem of equity crowdfunding. More specifically, this research provides applicable measurements to mitigate information asymmetry *between entrepreneurs and investors*, and *between entrepreneurs and platforms*.

The information asymmetry is reduced *between entrepreneurs and investors* by presenting entrepreneurs success factors from all literature from investors' point of view. Those factors are perceived as positive signals to investors of a quality equity crowdfunding campaign, thus they make decisions to invest. By collecting those success factors and present to the entrepreneurs with an assessment tool, it raises awareness among entrepreneurs, hence, possible to promote equity crowdfunding in the Netherlands.

Another information asymmetry mentioned earlier would be reduced *between entrepreneurs and platforms* by presenting platforms how entrepreneurs think equity crowdfunding can be more appealing to them. By interviewee thoughts and suggestions from entrepreneurs, together with second-hand information collected in this research how platforms in the UK are operating, the Netherlands platforms can get

constructive and feasible recommendations. Platforms also need innovation, how their business models can adapt to what entrepreneurs and investors want, how to be capable of lowering risks for investors and helping start-ups to grow after a successful campaign. This research would address all the issues mentioned above.

This research is relevant to the master program of Management of Technology (MoT), since most of students who graduate from Management of Technology program would pursue their career as consultants, managers, or entrepreneurs in the future. This study is especially relevant to MoT students who are following specialisations in *Entrepreneurship and Innovation* or *Economics and Finance*.

This research will provide insightful knowledge to entrepreneurs, managers or consultants in the fields of start-up financing, innovation and entrepreneurship. It can help them understand the role of equity crowdfunding in general in start-up financing, and future trends of equity crowdfunding. As the scope of this research is in high tech sector in the Netherlands, this research is relevant to the Master program Management of Technology.

1.6.2 Contributions of this study

The purpose of this study is to reduce information asymmetry in the equity crowdfunding industry. By doing this, it is possible to improve the role of equity crowdfunding in the Netherlands. Contributions of this study are directly beneficial to two parties in the ecosystem of equity crowdfunding: *entrepreneurs (including incubators and accelerators) and platforms.*

First of all, this research provides a literature review of equity crowdfunding, an emerging phenomenon but a more sophisticated and risky type in the crowdfunding family. By sketching the relationships/determinants of success factors of equity crowdfunding in different literature, this research derives a useful tool, a self-evaluating assessment tool for entrepreneurs to pre-screen themselves whether equity crowdfunding can be considered as an alternative funding for their seed-stage finance. It facilitates entrepreneurs who are not familiar or who are hesitant to choose equity crowdfunding to make fundraising decisions more efficiently and effectively. Also, it can be beneficial to accelerators or incubators for start-ups. This assessment tool can be used in accelerators, incubators to guide entrepreneurs as part of the training/mentoring program.

Secondly, this research provides insights from Netherlands entrepreneurs' point of view what their preferences are in seed-stage financing, thus this research can provide a better understanding why start-ups in high tech sector in the Netherlands are hesitant to choose equity crowdfunding.

Thirdly, this research raises awareness of equity crowdfunding as an alternative source of seed-stage finance to entrepreneurs, by mitigating the information asymmetry between entrepreneurs and investors. The success factors in the assessment tool can possibly attract entrepreneurs who did not plan to choose equity crowdfunding, but find themselves qualified to raise money on equity crowdfunding platforms. With more projects listed on equity crowdfunding platforms, it would be possible to attract latent individuals (accredited investors and non-accredited investors) to invest in equity crowdfunding campaigns. So this research would foster a more sustainable eco-system of equity crowdfunding in the Netherlands by attracting more entrepreneurs.

Additionally, this research can also mitigate information asymmetry between entrepreneurs and platforms, since platforms try to attract entrepreneurs to their websites but entrepreneurs are still hesitant to do so. This research provides constructive suggestions or recommendations to Netherlands equity crowdfunding platforms by analysing what exactly entrepreneurs want from an equity crowdfunding campaign. Good quality start-ups are not worried about being funded. Sometimes they can be selective on the money source. How to attract these groups of good quality start-ups can be a challenge to the equity crowdfunding platforms, since for good-quality start-ups, they are not worried about getting investors. They are more careful to choose money from which investors. Platforms are also individual business entities who can have different business models, or to focus on a certain niche market. By presenting what functions entrepreneurs think are valuable to them in equity crowdfunding, it can directly help platforms to be competitive in the global market. In the case of this thesis, by updating the newest trend for the market leader of equity crowdfunding, the UK, platforms from the Netherlands can keep up with the latest trend as well as getting insights from feedback of entrepreneurs in this research.

In summary, the contributions of this research are to reduce information asymmetry in equity crowdfunding ecosystem to mitigate the "lemon market" effect (Akerlof, 1970). Hence, the results of this research would prevent the Netherlands equity crowdfunding industry shrink or fail in the future, and foster a more prosperous investment environment in equity crowdfunding in the Netherlands.

1.7 Outline of the thesis

In Chapter 1 introduction, problem description, research objective and research questions, and the scope of this research are discussed. Also in Chapter 1, it stated the importance relevance and the contributions of this research.

In Chapter 2, this methodology explains why this research is explorative, why a qualitative research method is chosen. This Chapter explains an assessment tool would be derived based on the excising research of success factors from the literature review. Then in this Chapter, it explains why semi-structured interview approach is chosen and what are the criteria for interview candidates for this research. Interview protocol and interview questions are developed in an aim to improve and validate the assessment tool for Netherlands entrepreneurs in high-tech sector.

In Chapter 3, there are two parts. The first part includes literature about crowdfunding. In the second part, specifically equity crowdfunding is discussed from three stakeholder's point of view. They are entrepreneurs, platforms, and investors.

Chapter 4 presents the process of developing interview questions, including an assessment tool draft how it is derived from the literature of success factors of equity crowdfunding.

In Chapter 5, interview data is collected and analysed, as well as a summary of all the results of interviews, categorised by sections in interview questions.

In the last Chapter 6, the Chapter of conclusion, reflection throughout the thesis and limitations of the results are discussed. In the reflection, choices of theories, choices of research questions, generalizability and limitation of this research is also discussed.

2. Methodology

2.1 Conceptual Framework

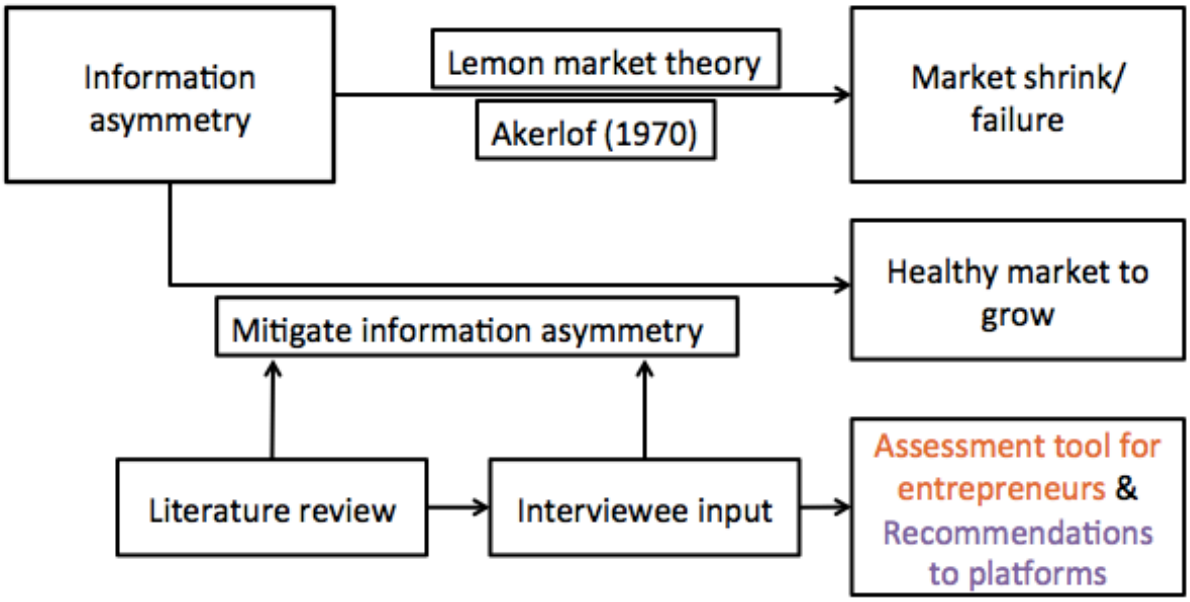

Figure 1 Conceptual framework of this thesis. (Source: author)

The figure above shows the conceptual framework of this Master's thesis. The goal of this research is to mitigate information asymmetry, thus to counteract the "lemon market" theory (Akerlof, 1970). This research aims to promote the equity crowdfunding market grow faster in the Netherlands instead of letting it shrink. By conducting literature review and qualitative data collection from entrepreneurs, some of the information asymmetry can be mitigated.

From literature review and qualitative data collection, Aim of this thesis is to develop and validate an assessment tool for entrepreneurs whether equity crowdfunding can be considered as a source of see-stage financing. Also, data gathered from interviews would give a better view as to how platforms can attract more projects from entrepreneurs.

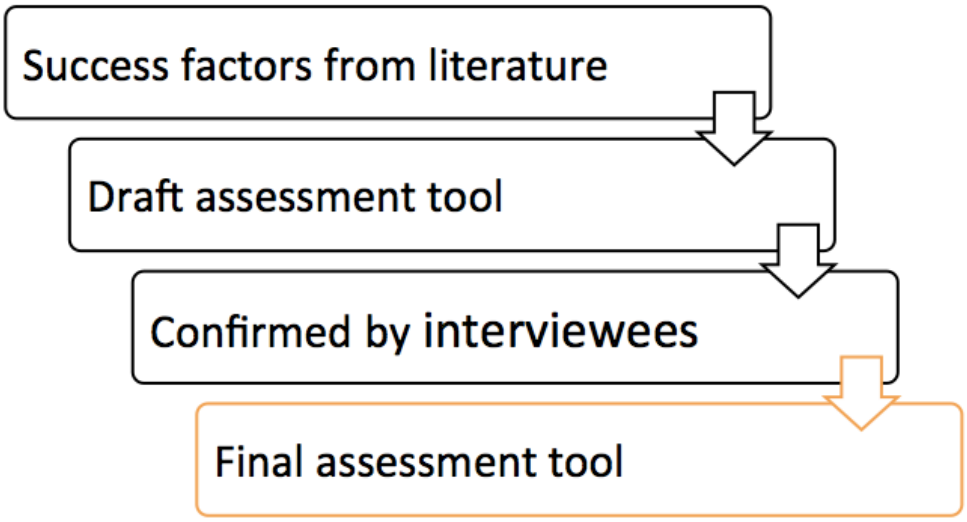

Figure 2 Steps to finalise the assessment tool. (Source: author)

From figure above, a draft assessment tool is first derived from all success factors available from literature. By analysing the importance and relevance to the context of the Netherlands, some success factors are selected and then compiled into an assessment tool with options for entrepreneurs to choose from. The draft assessment tool would be presented to interviewees and thus be evaluated by them. Feedbacks from interviewees would be collected to improve this tool. Based on data analysis relevant changes will be made to the draft assessment tool. In the end, the draft assessment tool is revised to the final version.

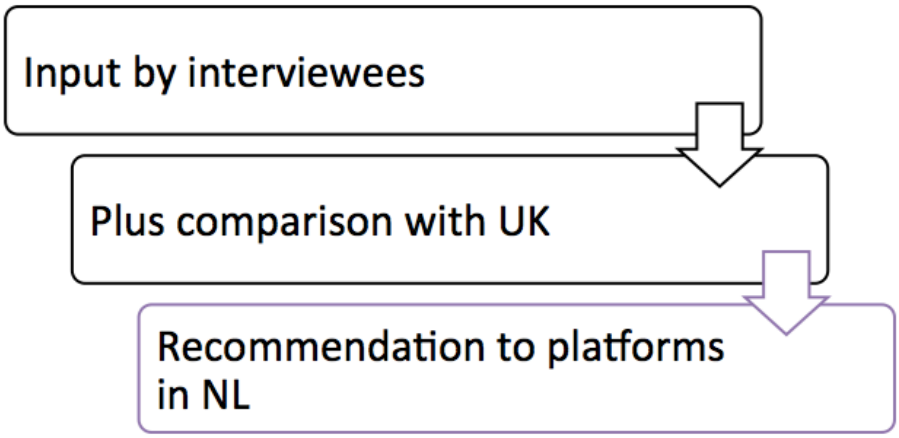

Figure 3 Steps to conclude recommendations for platforms. (Source: author)

Another deliverable of this thesis is recommendation to platforms on how to attract more projects from entrepreneurs. Equity crowdfunding is still an emerging phenomenon globally and not all entrepreneurs choose it as a source of finance due to their lack of knowledge. By aiming at the market leader of equity crowdfunding, the UK, there is innovation of their business models that Netherlands platforms can learn from. Combining both, input from interviewees recommendation to platforms and the secondary

information collected for the UK platforms, this research will conclude recommendations for platforms in the Netherlands, how to attract more entrepreneurs to choose equity crowdfunding as one source of funding.

2.2 Literature Review

This research would use a systematic review for all the existing literature for equity crowdfunding to enrich the body of knowledge of this field, since it is an emerging and innovative method of financing for start-ups and small and medium sized enterprises (SMEs). By compiling and comparing different theories, we would sketch the relationships between different variables for success factors of equity crowdfunding. However, there might be conflicting theories from different researchers, this research would also look into the reasons and explanations. If there are multiple researchers reinforcing similar theories, then it means the findings were valid and sound.

For literature review, the keywords of "crowdfunding", "crowdsourcing", "equity crowdfunding", "fundraising", "Symbid", "success rate of venture capital", "success rate of angel investment", "angel investors", "business angels", "venture capital", "start-ups", "start-up financing", "seed-stage financing", "entrepreneurial financing", "traditional financing", "alternative financing", "entrepreneurs", "crowdfunding campaigns", "crowdfunding platforms", "crowd", "crowdfunding investors", "SME", "lemon market theory", "signalling theory", "motivations" are searched in Google scholar and other academic search engine or scientific journal database, such as Scopus, ScienceDirect, Elsevier, Econstor, etc.

2.2 Qualitative Research

According to (Denzin & Lincoln, 1994), qualitative research is to ask broad, open-ended questions, while quantitative research is to ask specific, close questions. Qualitative research is to collect data through observations and interviews, text and images, to present meaning, experiences and views, while quantitative research is to collect data directly from measurable unites to test hypothesis. Qualitative research focuses on experience, opinions, feelings and knowledge, while quantitative research focus on measurement, comparison and casual effect.

Qualitative research is an appropriate approach for explorative study. It can be applied in a broad variety of topics in real life setting. It can be applied in different academic disciplines and professions. Qualitative research can attend the contextual richness of a topic (Yin, 2015, p. 3). In this case, the emerging phenomenon of equity crowdfunding still needs to be better understood.

Equity crowdfunding has only existed in Europe since 2011. Due to the fact that the mechanisms and dynamics of crowdfunding, especially equity crowdfunding are not yet well understood (Griffin, 2012). This research is explorative to understand more about equity crowdfunding in perspectives of entrepreneurs in the context of the Netherlands.

This research is to find out what are the concerns of entrepreneurs from high tech sector in the Netherlands. From their perspectives, how to improve equity crowdfunding ecosystem to attract more quality of projects on equity crowdfunding platforms, thus attract more investors as return.

There are complicated reasons behind each entrepreneur why they are hesitant to choose equity crowdfunding, why they prefer traditional sources of funding. Without an open question to be asked to entrepreneurs to discover questions above, it is not possible by a quantitative method to collect data through survey with close-ended answer options. For example, questions like "what are your concerns not to choose equity crowdfunding", or "what are your recommendation for improving equity crowdfunding so it can attract more entrepreneurs in high tech sector in the Netherlands?" are not possible to be addressed by surveys.

Because of reasons above, qualitative research is an appropriate research method for this study.

Qualitative sampling starts with precisely defining the target population (Sekaran & Bougie, 2010). In this research, the target population is entrepreneurs of start-ups in the technological sector in the Netherlands.

For qualitative research, sampling is *theoretical sampling*, introduced by Glaser and Strauss (1990). It means that the sampling can stop until there is no new input of information. In this research, interview invitations are sent out via emails, LinkedIn messages and friends referrals. The interviews process can start schedule as soon as there is someone is willing to make an appointment of interviewing. Meanwhile, interview invitations are sent out to reach more potential participants. Based on the concept of theoretical sampling mentioned earlier, the data collection of interview can be stopped when there is no longer new input of answers in interview questions among all interviewees.

2.3 Semi-structured interviews

Semi-structured interviews are designed with a sequential questionnaire beforehand, combining characteristics from both structured and unstructured interviews. Interviews are often recorded since there are open-end questions involved. (Cohen & Crabtree, 2006). Semi-structured interview method is chosen for this research, based on grounded theory by Glaser & Strauss (1967) and a commonly referenced book by Yin (2015) and Drever (1995).

The qualitative data of this research, aims to verify the assessment tool derived from literature review, is collected by semi-structured interviews. Interviews are the most common tool to apply in qualitative research. There are different approaches to conduct interviews. Scholars prefer to use semi-structured interview approach because the questions can be prepared beforehand with a structure but during the interview process, also allows flexibility for interviewees to share more information/insights freely (Drever, 1995). There is a list of questions prepared before actual interviews to cover all the necessary research questions from this research. Semi-structured interview approach is appropriate for small-scale research. In this research case, start-ups in the Netherlands in high-tech sector are relatively a small group of entrepreneurs compared to the ones from other sectors.. Among the ones who are seeking external capital and have their opinions of equity crowdfunding are indeed a small-scale of population. So semi-structured interview technique is selected in this research.

Also, because equity crowdfunding is an emerging finance alternative, which has only existed since 2011 in Europe (Hemer, 2011). The concept of equity crowdfunding is new so that there is limited literature in this field. Due to the explorative nature of this research, semi-structured interview is the best option since it is not ideal to put constraints on potentially getting more insights or in-depth discussion with entrepreneurs who may have different concerns or deterrents from literature review. Also in this research, the opinions from entrepreneurs' perspective about future development of equity crowdfunding in the Netherlands are also part of the contribution of this research on how to foster and promote equity crowdfunding ecosystem. So a semi-structured interview can enable more flexibility on opinion sharing in this specific research (Drever, 1995). That is why semi-structured interview is chosen as qualitative research approach in this explorative study of equity crowdfunding.

2.4 Criteria for Interview Candidates

The purposes of the interviews in this research are: a) To provide a better understanding why start-ups in high tech sector in the Netherlands are hesitant to choose equity crowdfunding. b) To understand their preference in seed-stage financing. c) To verify the assessment tool, in which all the success factors of equity crowdfunding presented. d) To provide an outlook from entrepreneurs' perspective on how equity crowdfunding platforms can be more attractive to them.

To reach the goals from above, the interviewees have to meet followings criteria at the same time:

1. Start-ups that are in high-tech sector in the Netherlands. Start-ups who are at seed-stage or early-stage, who have experience seeking external funding including traditional sources and alternative ones

2. Start-ups that are familiar with equity crowdfunding and can give comparison of traditional funding sources and alternative ones

3. Start-ups who can provide insights from their perspectives why they do not choose equity crowdfunding, and also provide constructive recommendations on how to improve the equity crowdfunding to be more attractive to them

To approach qualified interview candidates from criteria above, there are several channels to reach.

1. Technological incubator
   Yes!Delft is the largest tech incubator in Europe, the 4th business incubator in UBI ranking (Innovation Quarter, 2015), in which more than four hundred incubators across seven countries were analysed annually by a Swedish consulting firm. Also, Yes!Delft is affiliated with TU Delft. Hence, start-ups in Yes!Delft who are seeking external funding or who have experiences with seeking external funding can be candidates of my interview, as long as they are familiar with equity crowdfunding and have concerns of choosing equity crowd funding based on their preferences.

2. LinkedIn search
   Key words like Yes!Delft, founders, high-tech sector, equity crowdfunding, etc.

3. Entrepreneurship speeches or networking events in the Netherlands, such as Entrepreneurship Day in Universities, entrepreneurship classes guest lecturers, entrepreneurship networking events in Venture Café Rotterdam.

4. Friends reference through social media request
   By posting criteria of interview candidates on social media like Facebook or LinkedIn, friends can possibly recommend some contacts they have heard of as potential interview candidates. Because of personal connection to the potential interview candidates, there is a higher chance to be referenced for interview appointments. However, a background research of whether this specific start-up is suitable for this research would be conducted prior to the request of an interview by LinkedIn search.

3. Literature Review

3.1 Introduction

The research background is already provided in Chapter 1.1. Following the conceptual framework in Chapter 2.1, this Chapter would explore more literature about information asymmetry from Akerlof (1970), equity crowdfunding, to partially contribute to the research question **"what would an assessment framework look like for entrepreneurs in high-tech start-ups in the Netherlands to assess them whether equity crowdfunding can be considered in seed-stage financing?**" Based on the design of this research, an assessment framework would first compiled based on success factors of equity crowdfunding, then by conducting interviews for feedback to further validate a final version of the assessment framework (tool).

3.1.1 Different stage of start-ups

There are seven stages of business maturity cycle: seed stage, start-up stage, growth stage, established stage, expansion stage, mature stage, and exit stage (Janssen, 2013).

Crowdfunding most often occurs at the early stage investments (seed-stage and start-up stage). From the volume, crowdfunding can range from 10k to 50k while angel investors can range much bigger range of investment. But most often VC invests more than 1 million USD (Kantor, 2014).

The risk is highly associated with the development of the company. With time, as the company grows bigger, it demonstrates more capability of profitability of the start-up. The risk accordingly drops. However, the seed-stage and start-upstage are so high risk that even professional institutional funds like venture capital are more often to choose start-ups in growth-stage to avoid risks (Kantor, 2014).

At first stage of a start-up, Idea & co-Founder Stage, start-ups are mostly funded by friends and family or accelerator supported by the government. From the seed-stage to start-up stage, start-ups still struggle to grow within financial restraints to keep on developing further. At this time, it is still highly uncertain whether the market can accept the idea of the start-up. Crowdfunding as an alternative finance source is suitable at this stage for entrepreneurs to raise funds. Also, angel investors, or so-called business angels step in at this stage as well.

If the start-up survives after this stage and shows a strong indication of further growth, VC would step in to bring much bigger amount of cash flow into this stage, to accelerate the growth of the company. Normally it can be down in different rounds, which are so called Series A, B and C. This is a very brief demonstration of how a start-up develops from an idea into a well- established company in steady phase as described in the figure.

Statistics show, for venture capital, it takes average 5 years to exit via a merger and acquisition (M&A), 7 years to exit by an IPO. For angel investors, who most often invested 1 or 2 years earlier than VC, an average 7 to 8 years of duration in initial investment can exit by an IPO or acquisition (CB Insights, 2013).

3.1.2 Overview of alternative finance in Europe

According to an overview of European Alternative Finance by Cambridge University, Alternative financing can be categorized as follows: (Cambridge Centre for Alternative Finance, 2016)

- Peer-to-Peer Consumer lending
- Peer-to-Peer business lending
- Equity based crowdfunding
- Reward based crowdfunding
- Invoice trading
- Real estate crowdfunding

- Donation based crowdfunding
- Debt-based securities
- Balance sheet business lending
- Profit sharing crowdfunding

The above sequence of the types of alternative finance above is descending in terms of total market volume of the year 2015. The brief definition of individual alternative finance models can be seen in the following table, together with the 2015 market volume. However, because the focus of this study is equity crowdfunding, in the following chart, only equity crowdfunding, reward crowdfunding, donation crowdfunding and debt crowdfunding are taking into account in this research, in which debt crowdfunding is categorised into two categories (Peer-to-Peer Consumer Lending and Peer-to-Peer Business Lending) in the 2nd European Alternative Finance Industry Report (2016).

Alternative Finance Model	Definition	2015 Market Volume
Peer-to-Peer Consumer Lending	Individuals or institutional funders provide a loan to a consumer borrower.	€ 365.80m
Peer-to-Peer Business Lending	Individuals or institutional funders provide a loan to a business borrower.	€ 212.08m
Equity-based Crowdfunding	Individuals or institutional funders purchase equity issued by a company.	€ 159.32m
Reward-based Crowdfunding	Backers provide finance to individuals, projects or companies in exchange for non-monetary rewards or products.	€139.27m
Invoice Trading	Individuals or institutional funders purchase invoices or receivable notes from a business at a discount.	€ 80.59m
Real Estate Crowdfunding	Individuals or institutional funders provide equity or subordinated-debt financing for real estate.	€ 26.97m
Donation-based Crowdfunding	Donors provide funding to individuals, projects or companies based on philanthropic or civic motivations with no expectation of monetary or material return.	€ 21.71 m
Debt-based Securities	Individuals or institutional funders purchase debt-based securities, typically a bond or debenture at a fixed interest rate.	€ 10.73m
Balance Sheet Business Lending	The platform entity provides a loan directly to a business borrower.	€ 2.35m
Profit Sharing Crowdfunding	Individuals or institutions purchase securities from a company, such as shares or bonds, and share in the profits or royalties of the business.	€ 0.54m

Table 2 Alternative finance in Europe (Cambridge Centre for Alternative Finance, 2016). (Source: Cambridge Centre for Alternative Finance, 2016, page 31)

The Netherlands is ranked 3rd in total volume of alternative finance in Europe, excluding the UK (111 million euro in 2015), after France (318 million euro in 2015) and Germany (249 million euro in 2015). However, by per capita, the Netherlands is ranked first in Europe (excluding the UK).

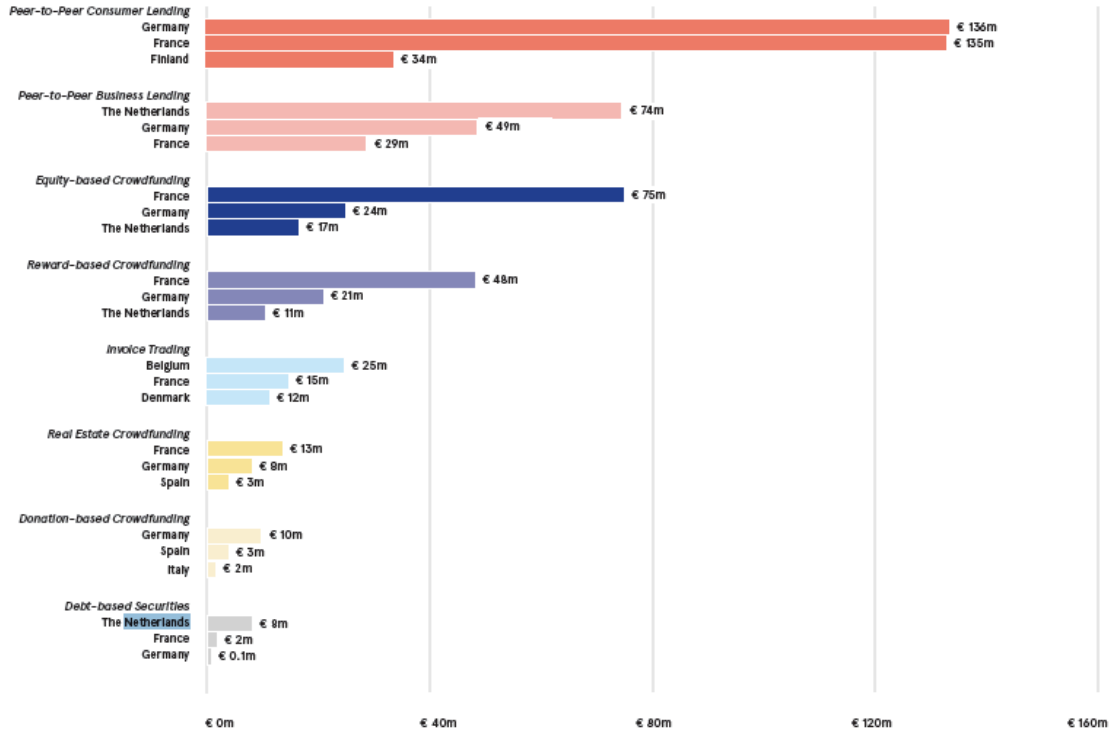

Figure 3 Top Three Countries by Model Alternative Finance Volume (Excl. UK) 2015 (€ EUR). (Source: Cambridge Centre for Alternative Finance, 2016, page 34)

The UK is a very developed region in terms of alternative financing, as well as equity crowdfunding. However, in the 2nd European Alternative Finance Industry Report (2016), the UK is excluded for most of the rankings and comparison. Part of the reason can be the UK exit from European Union, but also because the UK is leading any ranking by far from rest of European countries. In European alternative finance industry in 2015, the UK alone takes up 81% and rest of European countries count for the other 19% (Cambridge Centre for Alternative Finance, 2016).

According to Freeman & Nutting (2015), Peer-to-Peer lending is the same as debt based crowdfunding, but in the 2nd European Alternative Finance Industry Report (2016), there are two types of debt-based crowdfunding, one is P2P business lending and the other one is P2P consumer lending. From figure above, The Netherlands is at the 1st place in Peer-to-Peer business lending. In terms of P2P consumer lending, the Netherlands is falling out of top 3 and not specified in this report. For equity crowdfunding, the Netherlands is ranked number 3 after France and Germany in 2015. Same ranking for reward based crowdfunding, France first, Germany 2nd and the Netherlands the 3rd. If the UK is included in the ranking of equity crowdfunding, Netherlands would be ranked number 4 in Europe by market volume in 2015.

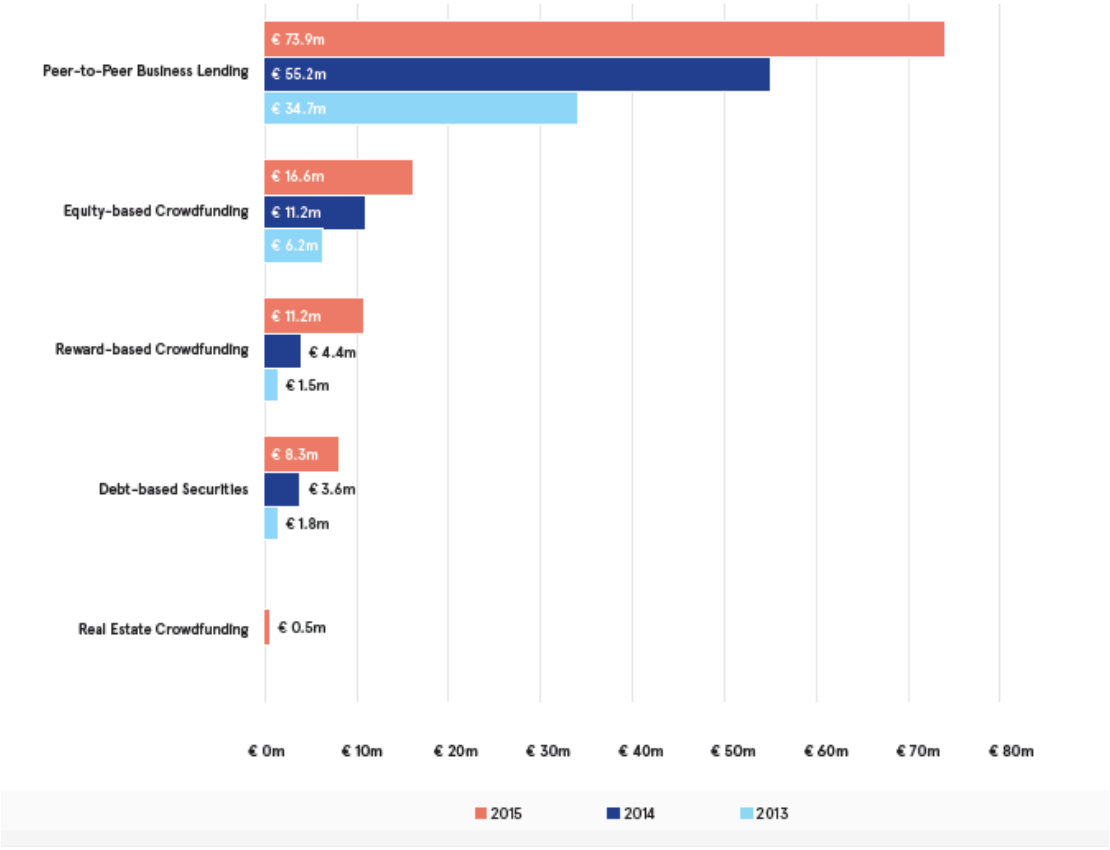

Figure 4 Alternative finance in the Netherlands from 2013-2015. (Source: Cambridge Centre for Alternative Finance, 2016, page 59)

Equity crowdfunding in the Netherlands is growing to 16.6 million euros in 2015, the second place of alternative finance after peer-to-peer business lending.

3.1.3 Crowdfunding

Traditionally, for start-ups, there are funding sources like venture capitals (VC), angel investors and bank loans to help founders to raise capital from. However, start-ups often face financial shortage to survive and grow at some point, but sometimes they are not able to get a bank loan, due to the lack of credentials required by certain banks (Schwienbacher & Larralde, 2010). With the development of the Internet, crowdfunding became a new trend of raising funds for start-ups, because content on Internet can go viral very fast and it is a fairly cheap way to promote business ideas. More and more start-ups consider getting funds through crowdfunding platforms/websites (Schwienbacher & Larralde, 2010). Another benefit of Internet is that, more and more people would like to use Internet as an intermediary to invest, because it is accessible and convenient. On equity crowdfunding websites, like Seedrs, crowds can invest as low as 10 euro. Motivations of entrepreneurs to raise funds from crowdfunding platforms, and investors like to provide funds through crowdfunding platforms will be discussed further in detail in Chapter 3.1.

Since crowdfunding is a new phenomenon and an innovative way of raising capital, there are limited research of crowdfunding, most of which are about reward-based crowdfunding. However, there are other types of crowdfunding as well, which are donation-based crowdfunding, lending-based crowdfunding and equity crowdfunding. Each type of crowdfunding has its own symbolic characteristics.

Definition of Crowdfunding

There are different definitions of crowdfunding according to different scholars in their papers. The most cited definitions of crowdfunding are as follows:

The first definition of this crowdfunding phenomenon is by Ordanini(2009). “This phenomenon, called crowdfunding, is a collective effort by people who network and pool their money together, usually via the Internet, in order to invest in and support efforts initiated by other people or organizations” (Ordanini, 2009).

"Crowdfunding involves an open call, essentially through the Internet, for the provision of financial resources either in form of donations (without rewards) or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes" (Belleflamme, Lambert, & Schwienbacher, 2010)

Types of Crowdfunding

One of the earliest research about crowdfunding was done in 2008 by Kleemann *et al.*. At that time, they used terminology “crowdsourcing” instead of “crowdfunding”. In their research, they first introduced types of crowdfunding as shown in the table below:

Type of Crowdsourcing	**Description**
Participation of consumers in product development and configuration	Companies ask for comments and suggestions on current and future products
Product design	Companies ask to develop a whole new product from A to Z
Competitive bids on specifically defined tasks or problems	Companies ask to give a solution to unsolved problems
Permanent open calls	Companies ask for any new information or documentation
Community reporting	Same as before apart that the work is done by a known community instead
Product rating by consumers and consumer profiling	Companies ask for product reviews and opinions for other users to see
Customer-to-customer support	Companies ask customers to help other customers and use it for consumer knowledge and product design

Table 3 Different sources of crowdfunding. (Source: Kleemann *et al.* 2008, page 8)

Also, in a more recent research, Beaulieu *et al.* (2015) made a more specified list of crowdfunding models shown in table below. According to Beaulieu *et al.* (2015), the crowdfunding are defined into six models. They are **private equity model** with the highest capital goal, followed by **royalty model** with a low to medium goal, then **micro financing model** with a lower goal, after that, it is **peer-to peer model** with a medium goal but with a wide variety. Then it is **reward model** with a goal ranged from very low to high. At last, it is **donation model** with low to medium goal.

Model	Exchange	Typical capital goal and contribution	Examples
Private Equity	Equity	Typical capital goal: high to very high Typical contribution: high to very high	CircleUp.com EquityNet.com
Royalty	Equity	Typical capital goal: low to medium Typical contribution: low	Sellaband.com SellanApp.com Appsfunder.com
Microfinancing	Debt	Typical capital goal: very low to low Typical contribution: very Low	Kiva.com Opportunity.org
Peer-to-Peer	Debt	Typical capital goal: medium (but wide variety) Typical contribution: relative to capital goal	Lendingclub.com Prosper.com GrowVC.com
Reward	Appreciation	Typical capital goal: low to high Typical contribution: very low to high-medium	Kickstarter.com Indiegogo.com Rockethub.com
Donation	Appreciation	Typical capital goal: low to medium Typical contribution: very low	Experiment.com Donorschoose.org

Table 4 Types of crowdfunding. (Source: Beaulieu *et al.* 2015, page 9)

However, according to the frequency of being referenced, the main stream of scholars define there are four types of crowdfunding (Massolution, 2013). In this thesis, we will also follow types of crowdfunding as below:

1. **Reward-based**, which means the investment is in exchange of current or future goods, such as platform Kickstarter, Indiegogo;
2. **Donation-based**, which means that investment goes to a social cause, such as platform firstgiving, GiveForward;
3. **Equity-based**, which means investment in exchange of shares in a growing company, such as platform Microventures, Crowdcube;
4. **Lending-based**, which means investment in exchange of interest, such as platform LendingClub, Zopa.

For reward based crowdfunding, according to Kickstarter, there are more than 2 billion USD have been raised since 2008 (Kickstarter, 2017), from more than 10 million investors (backers). This is only data of Kickstarter website alone. According to Massolution (2015), in 2015, they predict the total amount of money raised from crowdfunding website worldwide is 34.4 billion USD (Massolution, 2015).

In a recent report of Netherlands financial regulations (Schwienbacher A. , 2014), it categorised crowdfunding into five categories, which are:

- Donation-based
- Reward-based
- Lending-based
- Profit sharing-based
- Crowd-investing/ Securities-based (more well-known as equity-based crowdfunding or equity crowdfunding)

Equity crowdfunding is a more general used term in many other literatures. So in this master thesis, the category of "equity crowdfunding" will be used consistently, no matter what other types of terms is used in some literature, which is less commonly referred to as in most of other well-referenced literature.

Development of Crowdfunding

An online document on History of Crowdfunding written by Freeman and Nutting (2015), explained the history of crowdfunding. They believe the emergence of equity crowdfunding creates a new class of angel investors.

According to Freeman and Nutting (2015), website ArtistShare is the first crowdfunding website, which was launched in 2003 and it is still operating. It is a website that attract fans of music and collect money from fans to sponsor musicians who lack in funds to make albums. As in return, the fans would get albums after the albums are accomplished. By means of raising money like this, a musician Schneider raised about $130,000 and helped to pay for studio, producing and marketing the album. Eventually, it won a 2005 Grammy Award for best large jazz ensemble album.

Because of this successful example of crowdfunding in ArtisShare, this new concept of raising money has changed the way how people think of financing a project. It opened a door to both general public small investors and the entrepreneurs who need funding. Later in 2008, Indiegogo, one of the most prominent reward-based crowdfunding website was launched. Soon after in 2009, one of the most popular reward-based crowdfunding platform Kickstarter was launched. So far, Kickstarter has helped 103,823 projects funded successfully with $2,316,002,830 USD pledged to those projects (Kickstarter, 2017).

With the development of crowdfunding, more types of crowdfunding are added under the umbrella of crowdfunding. According to the most recent European industry report (Cambridge Centre for Alternative Finance, 2016), there is also a real estate crowdfunding and profit sharing crowdfunding, and lending-based crowdfunding is growing into Peer-to-Peer consumer lending and Peer-to-Peer business lending.

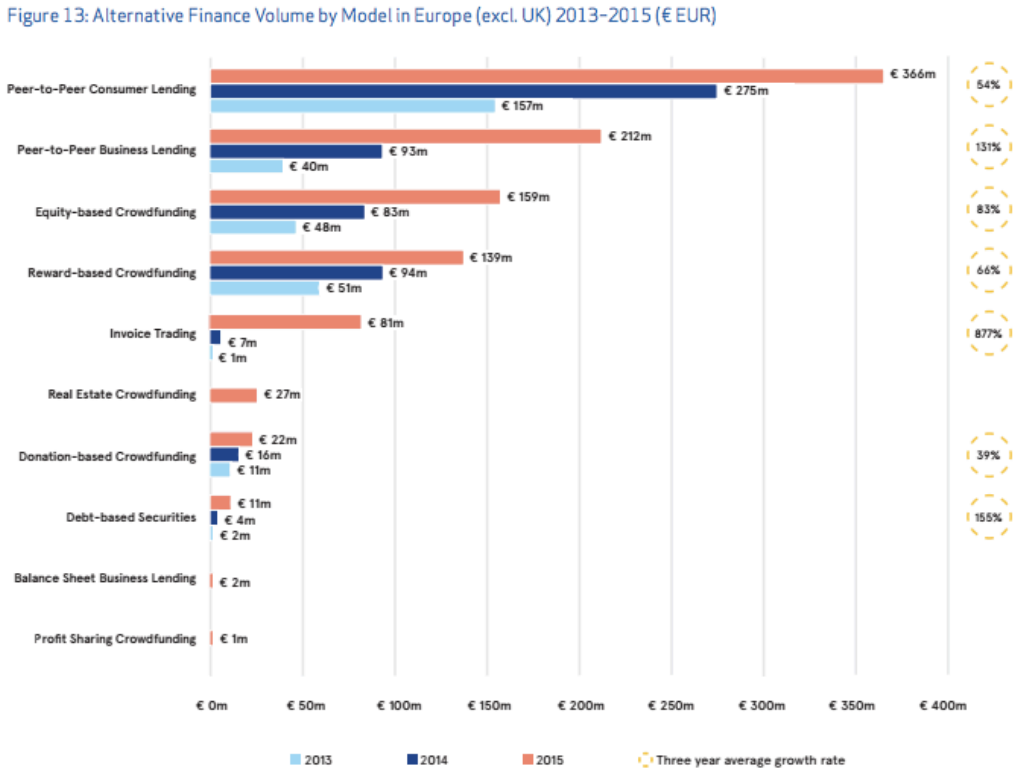

Figure 5 Alternative Finance Volumes by Model in Europe (excl. UK) 2013-2015 (Euro). (Source: Cambridge Centre for Alternative Finance, 2016, page 33)

SWOT of Crowdfunding

From the research Valanciene and Jegeleviciute (2013) they identified the strengths, weaknesses, opportunities and threats of crowdfunding by overviewing the existing literature at that moment. They view the **strengths** of crowdfunding are as follows: a chance to test the product's marketability, the accessibility of raising capital from internet, benefits for communities and rights to maintain making decisions in hands of entrepreneurs. The **weaknesses** they identified are challenges from administrative perspective and accounting perspective; the possibility of ideas being stolen since the fundraising project is promoted on internet; weaker investor protection due to legislation to improve; potential for fraud; lack of advice for investors since crowdfunding projects are exceptionally internet based and they are open to almost every internet users. Valanciene and Jegeleviciute (2013) pointed the **opportunities** of crowdfunding including the existence of niche, information society and positive effects crowdfunding is expected to have on economy. While the **threats** of this analysis is mainly focused on the equity crowdfunding that it is "as the risky nature of small business and unsuitable legal restriction arise".

Success Factors of Reward Crowdfunding

Mollick (2013) offered first insight of success factors of crowdfunding in a quantitative research. It used dataset of over 48,500 projects from Kickstarter from 2009 to July 2012, and apply different methods to analysis the success factors. He found out the **quality** of the crowdfunding has a positive influence on the success rate of fundraising, in which he gave three tips for founders. 1) Include a video in their Kickstarter project page; 2) Provide updates in first three days after it launched. 3) Reduce spelling errors, since he found out 2% of the sample (almost all 449 projects had a single error). All these three indicators suggest the quality of the crowdfunding. This research shows that if the investors view the project quality as high, they are more possible to invest in those projects. Besides quality, **network size** is also an important success factor (Mollick, 2013). Mollick (2013) showed in analysis that network size can also predict success.

Also, he found out the following factors associated with success of crowdfunding campaigns.

Increasing goal size is negatively influencing the success of crowdfunding campaigns. In other words, the higher the goal of fundraising, the less chance it will succeed.

Being featured on homepage of Kickstarter is a success factor.

Duration of the fundraising negatively associated with success, the possible explanation may be the confidence of founders.

The summary of findings of Mollick (2013) is summarised as below:

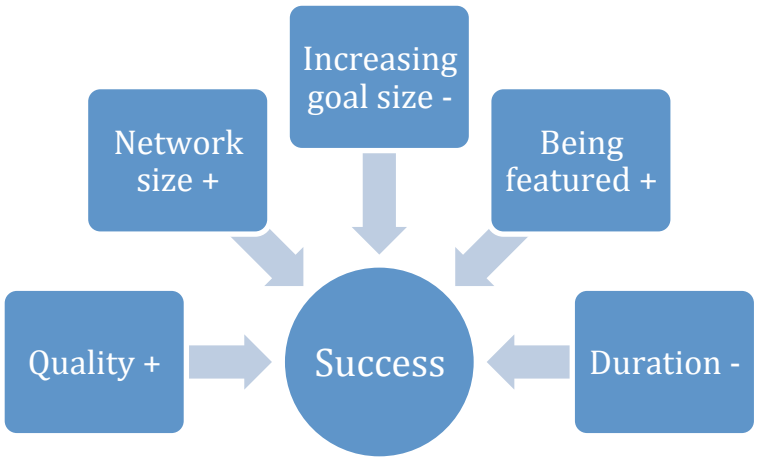

Figure 6 Factors that affect success of a crowdfunding campaign. (Source: Mollick, 2013)

Entrepreneurs' Motivations and Deterrents

Why would founders choose to use crowdfunding as a funding source? And what types of founders use crowdfunding? Davidson and Poor (2014) did survey on founders in culture industry and reach the conclusion "Crowdfunding appears to advantage culture producers with particular personality structures while disadvantaging others".

Gerber & Hui (2013) interviewed 84 crowdfunding participants including entrepreneurs and investors for this research. The top motivation for entrepreneurs (creators) is raising funds very efficiently in a limited time from a distributed network. The second motivation for entrepreneurs to use crowdfunding platform is the ability to expand awareness of entrepreneurs work by publicizing it online. Entrepreneurs (creators of crowdfunding campaign) can briefly introduce their products or service in a video and a description of text with it. Also, on their campaign page, the crowdfunding platform provides links to share easily to readers' social media, such as twitter, Facebook, etc. So it provides convenience for spreading the creators' work to potential investors social network. The following reasons from this research for creators who are motivated to use crowdfunding platform are:

- Forming connections with supporters;
- Gaining approval from supporters would also gaining confidence for creators to continue this project;
- Maintaining control of this project, unlike getting funds from some traditional sources of fundraising, that the control of the project is diluted into a small group of people (such as angel investors).

- Learning new fundraising skills.

Investors' Motivations and Deterrents

In reward-based crowdfunding, investors were transformed from customers' role (Ordanini, Miceli, Pizzetti, & Parasuraman, 2011), that investors most of the time view the campaign from a consumers perspective whether the product will be popular. So investors commitment on investing on crowdfunding website indicate their believes this product is promising in the market after it is launched.

From crowdfunding investors' perspective, the supporters (investors) have following motivations listed according to Gerber & Hui (2013).

- For reward-based crowdfunding investors, the rewards are the biggest motivation for them to invest;
- Good intention to help others to achieve their dreams;
- Being part of a community to show their support;
- Support a good cause or idea.

The summary of motivation and deterrents for both entrepreneurs (creators) and investors (supporters) are shown in the following table:

	Motivations	Deterrents
Creator	Raise Funds Expand Awareness of Work Form Connections Gain Approval Maintain Control Learn New Fundraising Skills	Inability to Attract Supporters Fear of Public Failure and Exposure Time and Resource Commitment
Supporter	Collect Rewards Help Others Be Part of a Community Support a Cause	Distrust of Creators' Use of Funds

Table 5 Motivations and Deterrents to Crowdfunding for entrepreneurs (creators) and investors (supporters). (Source: Gerber & Hui 2013, page 9)

3.2 Equity crowdfunding

3.2.1 Introduction

Definition of Equity Crowdfunding

According to Ahlers *et al.* (2015), "equity crowdfunding is a form of financing in which entrepreneurs make an open call to sell a specified amount of equity or bond-like shares in a company on the Internet, hoping to attract a large group of investors".

Comparison between Equity Crowdfunding and Other Types of Crowdfunding

Comparison with Reward-based Crowdfunding

In the research of Vulkan *et al.* (2016), authors compare and analyse the data from Kickstarter website from reward crowdfunding model to SEEDRS website from equity crowdfunding model in the UK. They found the average target of fundraising is substantially lower in Kickstarter 9,866 US dollars, comparing to 138,000 English pounds in SEEDRS. And average pledge of equity crowdfunding website SEEDRS (1,370 pounds) is substantially greater than the one of Kickstarter (80 US dollars), while the number of backers per campaign is almost the same between Kickstarter (67 backers) and SEEDRS (71 backers). So with easy calculation, the average target fundraising campaigns of Kickstarter is more than 10 times smaller than SEEDRS.

Vulkan *et al*. (2016) also states that equity crowdfunding is much similar to venture capital (VC) or angel investment rather than reward-based crowdfunding since they share some similarities of similar size of recent equity crowdfunding campaigns and the presence of a pre-money valuation, also, the fact of an expressed equity sharing deal for each pledge. However, equity crowdfunding is distinctly different from the traditional source of fundraising such as VC and angel investment from following perspectives: the fundraising process is much shorter; Contracts are simpler, the information provision is less, and the number of investors is much larger.

Vulkan *et al*. (2016) eventually concludes, "Equity crowdfunding is going to be a new and substantially different fundraising phenomena than reward-based crowdfunding".

Comparison with Angel Investment and Venture Capital

Venture Capital

Venture capital is institutional funds that can be invested in early-stage of start-ups, however, more and more VC prefer to invest in the later stage of a company when start-ups show potentials of growth in a more stable and risk-less manner comparing to early-stage. According to the research of Wiltbank (2015), 34% of the angel investment went to seed-stage funding to start-ups while comparing to only 2% from formal VC.

However, often VC invests in a larger amount of money per investment compared to equity crowdfunding. VC is one of a primary source of funding for start-ups. According to StartupJuncture, a website for reporting news related to Netherlands start-ups, it says crowdfunding is becoming a trend in the Netherlands for start-ups to raise money (van Gool, 2015).

According to the Netherlands start-ups website, StartupJuncture, Netherlands start-ups were able to raise 500 million euros from all over the world in 2014 (van Otterloo, 2014). But in 2015, the money raised in total drops to 430 million (van Gool, 2015). In 2016, the number drops again to 263 million (van Gool, 2016).

Zider (1998) thinks today the venture capitalists play a role more like bankers, and the entrepreneurs today are more like MBAs. Wright & Robbie (1998) thinks, venture capitalists are the business intermediates that trade off short-term liquidity in non-quoted shares held for the future prospects of a greater return. Lu, Tan, & Huang (2013) thinks venture capitalists are “rents seekers”, who always look for opportunities of superior returns in the market. Hsu (2004) thinks the earlier rounds of fundraising are very crucial to the start-ups, due to the highly undertrained nature of the start-ups. Also, Hsu (2004) thinks valuations of early-stage start-ups are liable to a great deal of negotiation.

At the early stage of the development of a start-up, it requires reputations and certifications to be recognised. Venture capital is an agent with the reputation to provide certifications that start-ups need. A reputable VC can provide value-added services to start-ups are intangible but very helpful, such as the key business contact for tapping into a particular industry, or recruiting an important senior executive in the related filed, or the knowledge that can help the start-up grow in the right direction fast. From the literature of Hsu (2004), start-ups think the money is the same, but where the money is from is what matters. They prefer the fundraising source that they not only get the money but also they can get the intangible value added services, for example, the network the VC can provide.

According to Hellmann & Puri (2002), their research discovered VC plays a role beyond traditional financial intermediaries, such as merely about money and monitoring. From their empirical research, they

found out that VC is involved with a variety of business activities, such as influence on human resources, adoption of different plans of stock options, and even possible to replace the original founder with an assigned outside CEO during the professionalization of start-ups. In the early stages of a company's development when it is still private, VC's role is particularly prominent in corporate governance.

Success rate of VC

In the research of Gage (2012), he collected data of more than 2,000 companies in U.S. from 2004 to 2010 who received venture capital funding, which was at least 1 million USD. He found out that at least three quarters of those firms do not return investment from VC. In other words, 3 out of 4 start-ups fail in the period of 2004-2010 in the US. More specifically, if there are 10 start-ups, statistically only 3 or 4 firms fail completely, and another 3 or 4 barely make the VC investment break even. Only 1 or 2 from these 10 start-ups would generate substantial profit back to VC.

Gage (2012) also mentioned the failure rate of start-ups varies depending on the definition of failure. If failure is defined as liquidating all assets, an estimation of 30% to 40% of US Start-ups fail. However, if failure is defined as failure to return investment at a projected rate of cash flow or growth, then more than 95% of the US start-ups fail.

From the National Venture Capital Association (NVCA) in US, it estimates about 25% to 30% of VC invested businesses fail.

Angel Investment

Angel investment, also as known as private investment, business angels (BAs), are individual professional investors who invest with their own money. Before they invest, hey interact with entrepreneurs directly and conduct due diligence. After they invest, they provide mentoring and coaching to entrepreneurs in their seed-stage or early-stage, which is regarded very valuable and crucial to start-ups.

Some statistics of angel investors from Wiltbank (2005) in the U. S. provide a glance of this group of wealthy individuals. This research conducted a detailed survey to take a close look at the personal profile of business angels in the US. This research reported 106 angel investors with 917 investments and 335 exits of these investments, in which 18% of the investment exited with 100% IRR, comparing to 61% of the investment exited with a loss. 67% of the investments were made in seed and start up stage. 73% of the investments went to start-ups with less than 2 years old. The average investment in the sample of Wiltbank (2005) is $270k. The personal profile of angel investors in this sample is that on average these angel

investors have founded three ventures by themselves and have worked over 13 years as an entrepreneur. At that moment when the survey was collected, they invest 20% of their personal wealth, which is $1.3 million in 7 ventures on average (Wiltbank, 2005).

3.2.2 Entrepreneurs

Specifically for equity crowdfunding, the research of entrepreneurs' part is lacking.

There are some challenges of entrepreneurs opting for equity crowdfunding according to (Gajda & Mason, 2013).

- Financial management:

How can start-ups be sure they are offering appropriate portion of equity in exchange of money, based on the fact that it is hard to make valuation for start-ups in general.

- Reputation management:

How can start-ups managing the capital and allocate them accordingly to reach optimal results of developing a start-up is a challenge for example. Also how to protect the reputation and prevent reputation damage of the start-up online should be a value proposition of start-ups when they are opting an equity crowdfunding campaign.

- Business impact:

It requires resources to guarantee the neutrality or positivity of the product or service of the start-up, both socially and environmentally. Internet can have impact on entrepreneurs' social and environmental responsibility and value proposition.

3.2.3 Platforms

According to Nederland Crowdfunding Association (2017), the platforms in the table below represent more than 90% of the crowdfunding capital raised for entrepreneurs.

Name	Link	Description
Symbid	www.symbid.nl	Equity-based and Convertible loan
Geldvoorelkaar	www.geldvoorelkaar.nl	Lending-based
Oneplanetcrowd	www.oneplanetcrowd.com	Lending-based
Kapitaalopmaat	www.kapitaalopmaat.nl	Lending-based
Horeca crowdfunding	www.horecacrowdfunding.nl	Lending-based
Collin Crowd Fund	www.collincrowdfund.nl	Lending-based
The Dutch deal	www.thedutchdeal.nl	Lending-based
Crowd partners	crowdpartners.nl	Lending-based
Lendahand	www.lendahand.com	Lending-based
Funding circle	www.fundingcircle.com	Lending-based
Voordegroei	www.voordegroei.nl	Lending-based
Leapfunder *	www.leapfunder.nl	Convertible loan
Seedrs **	www.seedrs.com	Equity-based, Convertible loan and Funds

Table 6 Netherlands major crowdfunding platforms by using categories. (Source: Author)

Symbid is a Netherlands equity crowdfunding platform starting from 2011, one of the first equity crowdfunding platforms in the world. It is the traditional equity crowdfunding platform that everyone can participate with minimum investment as low as 10 euros. However, to adapt to the competition of crowdfunding platforms, Symbid embraced hybrid models with equity-based model and lending-based model together as convertible loans (Grell, 2015). There are two types of models on Symbid now. One is equity, and the other one is convertible loan, according to Symbid official website (2017).

From Netherlands Crowdfunding Association, the listed platforms in the table above are mostly lending-based platforms. The last two platforms, Leapfunder and Seedrs, are added on top of the list provided by Netherlands Crowdfunding Association, because they are also well-known in the Netherlands, but for some reason they were not promoted on the website of Netherlands Crowdfunding Association.

* Leapfunder is a crowdfunding platform claimed only with angel investment. The minimum investment varies. Sometimes the minimum investment can be as much as 100,000 euros. For example, with a start-up called Bolt Mobility B.V. from Yes!Delft Incubator (Leapfunder, 2017).

**Seedrs is a UK-based international crowdfunding platform with presence in the Netherlands recently (Racefields, 2016). In Seedrs, there are three types of models for investors to choose from campaigns according to their official website (Seedrs, 2017): equity, funds and convertible loans.

Platforms are business entities to attract both entrepreneurs and investors. They also have business models, differences in the operation to stay competitive in the market. By comparing the differences of platforms between the UK and the Netherlands, it is good for the Nederland's platforms to understand the gap and possibly to innovate and follow the trend of world leader of equity crowdfunding, since currently the volume of equity crowdfunding in the UK is about 20 times as much as the volume in the Netherlands. From 2014 to 2015, the UK grew from £84 million to £332 million in equity crowdfunding with a growth rate of 295%. The Netherlands had a much lower growth ratio compared to the UK with €11.16 million in 2014 and €17 million in 2015 (Cambridge Centre for Alternative Finance, 2016).

There are some trendy points from the UK platforms.

- "All-or-nothing" vs. "Keep-it-all"

The United Kingdom has the biggest equity crowdfunding market, both in terms of campaign numbers and the volume (Signori & Vismara, 2016) (Cambridge Centre for Alternative Finance, 2016). In an aim to improve equity crowdfunding industry in the Netherlands, it is helpful to take a look at the UK's equity crowdfunding platforms and business models.

Crowdcube is the largest equity crowdfunding platform in the UK, based on the time period from establishing in 2011 to April 2016 according to Signori & Vismara (2016). It has successfully raised £150 million from more than 270,000 investors from 105 countries. The business model of Crowdcube is "all-or-nothing", which means if the target of the campaign failed to reach, the investment would return back to the investors. The Netherlands platform Symbid and Leapfunder are also using the model of "all-or-nothing".

However, "Keep-it-all" model is more commonly seen in reward-based crowdfunding, with a much less campaign target comparing to equity crowdfunding average campaign size.

- Lead investor

The second largest equity crowdfunding platform in the UK is SyndicateRoom, with a volume of more than £81 million as of May 2017 (SyndicateRoom, 2017). The business model of SyndicateRoom is that a professional investor is leading the investment at least by 25%, and the lead investor performs due diligence to the rest of the crowd. The success rate of a campaign to reach the final target is about 72%, while the average success rate of campaigns is 55%, according to the latest figure as of March 2016 (CrowdRating, 2016).

- Unified nominee structure

The third largest equity crowdfunding platform in the UK is Seedrs, which also has a presence in the Netherlands with an office located in Amsterdam.

The fourth largest equity crowdfunding platform in the UK is VentureFounders, with a success rate of a campaign at 78%, while average rate is 55% (CrowdRating, 2016).

In this business model, Seedrs and VentureFounders can act as the single shareholder of campaigns, with the money from investors put into a shared funding pool. “Funds” is an innovative model to help manage their crowd shareholders. Investors who put money into the funds will invest under “Seedrs” as one identity. So entrepreneurs for equity crowdfunding campaigns on Seedrs can manage shareholder relationship more easily when it comes to communication or future evaluation of their shares when new rounds of equity investment coming in. Also, “Funds” provide investors a portfolio management to spread of risks. When investors participated in “funds”, Seedrs invested in various projects in different industries for investors to leverage inherent high risks from start-ups.

- Operations on due diligence

Pierrakis & Collins (2013) discuss about different ways of platforms how they deal with due diligence and following-up after fundraising. Symbid performs due diligence after the campaign target is reached but before the funding is released to the entrepreneur. While other platforms like a leading platform in the UK called CrowdCube that performs due diligence before the campaign go online, which results in a 75% rejection rate for all the applicants who want to raise money on CrowdCube.

3.2.4 Investors

Since equity crowdfunding grows very fast, which is about 114% in 2012 according to Massolution (2013), it is interesting for researchers to investigate why it is popular and why investor are interested in the equity crowdfunding, due to the fact that equity crowdfunding involves more committed minimum investment per project, and equity crowdfunding is also much more complex and risky compared to other types of crowdfunding (Wilson & Testoni, 2014). However, the literature of the investors’ behaviour and motivation of equity crowdfunding is very limited. Most of the research is about reward-based crowdfunding.

A Glance of Netherlands investors on equity crowdfunding platforms

Currently, only one literature available provided an overview of investors on Netherlands equity crowdfunding platform, Symbid. Symbid is the only typical equity crowdfunding platform in the Netherlands. There is a similar platform in the Netherlands that only focused on convertible loans from their angel investor network, called Leapfunder. Due to the fact that Leapfunder only focuses on angel investors and only providing convertible loans to entrepreneurs, Leapfunder is not considered as a typical equity crowdfunding platform in the Netherlands in this research.

In the research of Cholakova& Clarysse (2015), the sample size is 155 participants who completed the full survey that was sent out by Symbid newsletter, with a responding rate of 34.14%. In the sample, the average age of investors on Symbid is 49.2 years old, of which 26.5% were female and 73.5% were male.

More statistics about this sample:

- 51.6% of them had started their own companies
- 5.2% of all participants had raised money from crowdfunding platforms as entrepreneurs
- 88.4% rob them have donated in the past such as Red Cross, etc.
- 21.9% have invested in non-equity crowdfunding platforms
- 67.1% have invested in stocks
- 45.8% have invested start-ups from other traditional sources as angel investors, etc.

Challenges of Investors

There are some challenges of investors for equity crowdfunding according to (Gajda & Mason, 2013).

- Valuations

It is always hard to estimate a valuation for start-ups since most of them do not generate revenue and some of them even are still developing a prototype of their product. On the platform, the offer of this much equity in exchange of this much funding, is based on the underlying valuation that pre-fixed by entrepreneurs or platforms or third parties. How to make sure not to pay too much money for exchanging the equity investors deserve is part of the investors' protection. Also, retail investors from the crowd cannot participate in valuation of the start-ups so they can only accept or deny participating in a listed offer.

- Follow-up

Being a crowd investor, there is an intermediate platform as a mechanism to interact between entrepreneurs and investors. However, after the money is successfully raised, the follow-up works of how the money is spent from entrepreneurs are out of sight of crowd investors. All the work of updates for future development of the start-up is up to entrepreneurs.

- Risks

Such as fraud of information asymmetry, would be harmful to influence the decision of making an investment or not for investors. After investing, the inherent high risks for start-ups, especially in high-tech sector are extremely uncertain. Retail investors should be educated how to leverage risks by having basic portfolio management knowledge from platforms.

- Business impact

The business impact of each individual crowd investor is very limited because, for one project on average, there might be 100 investors in exchange for 10% of the equity of a company. So each investor may only get 0.1% of the equity of the company. So basically there are no voting rights to interact with entrepreneurs on their business decisions as an individual. Based on the different platforms, it is possible to interact with entrepreneurs by having the platform as an intermediate method, and as a group. It is not possible to be involved with the daily businesses of a start-up at this moment as a crowd investor.

Future trends:

With the professional investment experience of accredited investors such as VC and angel investors, the success rate of investing start-ups in seed-stage is highly uncertain. That is why some study shows VC has moved away from seed stage financing to start-up financing. For example, 34% of the angel investment goes to seed-stage financing; however, only 2% of the VC is invested in seed-stage (Wiltbank, 2005). As listed earlier, 3 out of 4 venture capital deals do not return the investment, comparing to 2/3 of angel investment have negative return in financing start-ups. How risky is equity crowdfunding platforms to allow unprofessional crowds to participate in start-up financing?

There is literature of investors' motivation on crowdfunding platforms. Mostly are from reward-based crowdfunding, however, for investors of equity crowdfunding, there is limited research about their experience, profile, motivation in Europe. Future study can include the motivation of non-accredited individual investors, whether this group of investors from equity crowdfunding websites are growing,

whether more institutional funds like VC or accredited individuals like angel investors are growing. However, based on the current literature and the market research of different platforms of equity crowdfunding, more specialised platforms can attract more target group of investors. For example, certain platforms have a minimum amount of investment of 1,000 euro, and the investments were lead by a lead investor with reputation. Following investments by individual investors can participate by invitation, which created an exclusive environment of investors, which can foster information exchange in a smaller exclusive group.

4. Developing Interview Questions

4.1 Introduction

There are two main parts of questions going to be in this interview.

- Questions in Part 1 elicit general opinions about seed-stage financing from entrepreneurs.
- Questions in Part 2 seek feedback on the assessment tool, determining whether it is easy to understand and asking for recommendations for improvements.

In part 1, there are several segments of questions related to seed-stage financing, which include:

- Company and interviewee profile verification

The first question of the interview will confirm the company profile and role of the interviewee to make sure the start-up is suitable for this research; whether it is within the scope of the research, whether it is in the technological sector, whether the kind of service or product do they provide qualifies for the research, and whether the role of the interviewee is related to fundraising in their company.

- Comparison of seed-stage funding sources

In seed-stage financing, there are traditional fundraising sources and alternative ones. The interview will determine what types of source(s) the interviewees have chosen, including traditional sources and alternative ones, and why.

- Use of equity crowdfunding

Questions will focus on what entrepreneurs think about it, whether or not they consider it as an option when they are seeking funding in the seed stage, what concerns they may have, and any recommendations that, if implemented, would make them more open to using equity crowdfunding for fundraising.

- Recommendations to make equity crowdfunding more attractive specifically to entrepreneurs in the technological sector in the Netherlands

In Part 2, there are several questions that collect feedback on the self-evaluating assessment tool for entrepreneurs, including:

- What they think about the assessment tool
-
- Whether there are some success factors missing in the assessment tool but also important for running a successful campaign
-
- Whether this assessment tool can be truly helpful and is ready for real-world application

4.2 Success Factors of Equity Crowdfunding

In the recent research of signalling in equity crowdfunding, Ahlers *et al.* (2015) present the first insight of the effectiveness of signals that start-ups can use to induce small investors in equity crowdfunding to invest. They use multivariate analyses to evaluate 104 equity projects on ASSOB (an Australian platform) between October 2006 and October 2011. They found out:

- Percentage of MBA graduates among executive board members of a founding team is positively related with the number of investors.
- A higher number of board members are positive and statistically significant related to funding success for both higher expected number of investors, and for higher funding amount.

- An additional member on the board is related to an expected increase in the number of investors by a factor of 1.408 and an expected increase in the total funding amount by 119,000AUD.
- However, we find no statistically significant impact for the percentage of nonexecutive directors.
- Similarly to the previous findings, we do not find evidence of a relationship between intellectual capital (measured as patents granted), and funding success.

In summary, Ahlers *et al.* (2015) found that *human capital* (by using MBA degree as an indicator for executive board members) and *lower equity offering* are positively correlated to success in an equity crowdfunding campaign, and *lower information levels for risks* and *omission of a future outlook* (ambiguous information for investors to understand future outcome of this project) are negatively correlated with the success of a campaign. Also, surprisingly, the *intellectual capital* (patent granted) and *social capital* had little or no significant impact on the success of crowdfunding efforts (Ahlers, *et al.,* 2015).

Contrary to common sense, award-winning companies tended not to receive full funding in the data set of 139 equity crowdfunding projects in ASSOB (Ahlers *et al*., 2015).

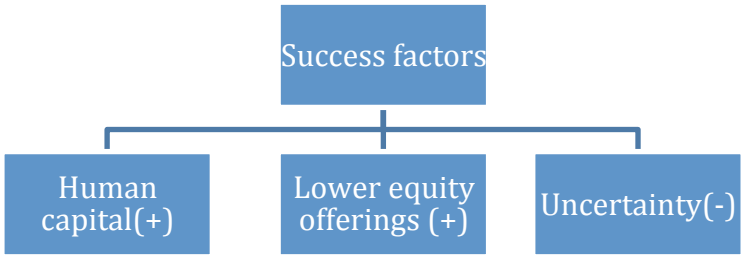

Figure 7 Success factors of equity crowdfunding. (Source: Ahlers *et al*. (2015)

In Vismara (2016b) with a sample of equity crowdfunding projects from CrowdCube and Seedrs, both of which are UK platforms, it confirms the finding of Ahlers *et al.* (2015) that fundraisers (entrepreneurs) who sold a lower percentage of their equity would be more likely to successfully achieve the target of an equity crowdfunding campaign. However, this study also shows social capital is positively correlated to success of an equity crowdfunding campaign, which contradicts the finding of Ahlers *et al.* that there is no significant correlation between social capital and success of equity crowdfunding campaigns.

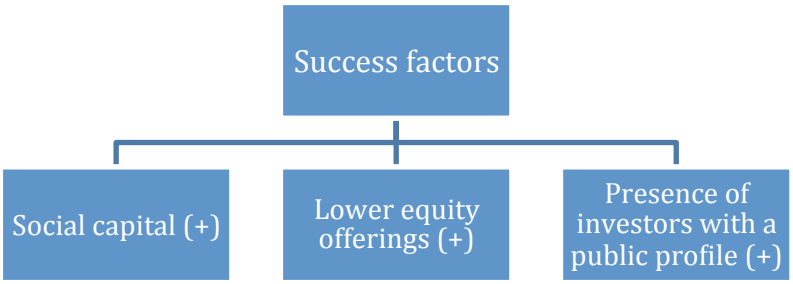

Figure 8 Success factors of equity crowdfunding. (Source: Vismara 2016a)

In an equity crowdfunding context, late investors tend to fund both campaigns that have been backed by many investors earlier and campaigns that are about to reach their fundraising targets (Cumming &Johan, 2013).

Vismara (2016a), with a sample of 132 equity crowdfunding projects from Crowdcube in 2014, found not only that early backers (investors) contribute to the success of an equity crowdfunding campaigns, but also that the presence of investors with a public profile increases the appeal of a campaign, leading to more investors in later stages of the project.

Large investment

In a study by Vulkan *et al.* (2016) of 636 campaigns between 2012-2015 from platform SEEDRS in the UK, the data show that 33.9% of the projects ended up reaching their fundraising targets. From the successful campaigns, 17.5% of the projects reached their goals within one day, comparing to 51.2% of the projects reaching full funding within one week. Failed projects, on the other hand, failed miserably in every case, on average raising only about 11.1% of the targeted amount.

Vulkan *et al.* (2016) stated that a few large investments could play a major role in driving the success of an equity crowdfunding campaign. In their sample, the largest investment in a successful campaign amounted to 30% of the total investment raised. However, in unsuccessful campaigns, the highest single investment was only 5.4% of the total amount raised. A large investment can not only add to the accumulative total of the fundraising campaign, but also to a significant degree it can be interpreted as a positive signal of the potential success of a project, which can address some concerns of investors in a highly uncertain crowdfunding venture.

Investors with public profiles

According to Ahlers *et al.* (2015), uncertainty was negatively correlated with the success of an

equity crowdfunding campaign, which means "ambiguous information about an investment opportunity that they are unable to identify all future outcomes and to clearly allocate probabilities to the outcomes".

In the research of Vulkan, Astebro, & Fernandez Sierra (2016) with the 636 campaigns from SEEDRS, they found that 50% of the investors prefer not to share their personal profile, sharing only their geographic location, previous investments in other campaigns, and sometimes social media contacts or short description of themselves. The effect of this, however, is to add an element of uncertainty into the campaign.

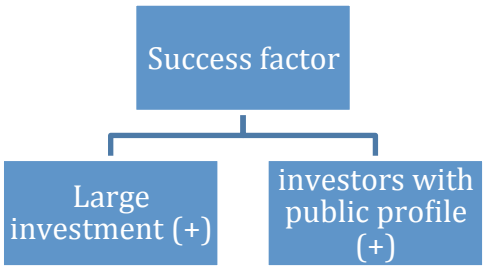

Figure 9 Success factor. (Source: Vulkan *et al.*, 2016)

Business angel investments, grants, intellectual property

In the research of Ralcheva & Roosenboom (2016), 541 campaigns were analysed between January 2012 and March 2015. The results suggest that companies that are backed by a business angel, win grants, and protect their intellectual property have significantly increased chances of success in equity crowdfunding. Contradictory to the previous research of Vismara (2016), they found retaining equity does not influence funding success.

More detailed results of Ralcheva & Roosenboom (2016):

Key determinants of equity crowdfunding success: Venture capitalists, business angels, grants positively contribute to funding success: Awards and protection of intellectual property.

1. Funding success improves when companies are younger, already made a first sale, and located in a big city or lower the price of their shares during the pitch

2. Important for companies and platforms to know investors pay attention to the certifications and signals.

3. Most equity crowdfunding investors are not unsophisticated, but instead, they look for certification and signals of the projects the similar as professional investors.

4. It's better for companies to reach a certain stage of development before they can launch equity crowdfunding campaign.

5. Companies and crowdfunding platforms can benefit from taking feedback form investors, such as lowering the price of their shares after getting feedback from investors.

4.2.1 Summary of Key Literature of Equity Crowdfunding

Key literature	**Article name**	**Sample**
Ahlers *et al.* *(*2015)	Signaling in Equity Crowdfunding	104 equity offerings on ASSOB 2006 – 2011, Australian
Vismara (2016a)	Information Cascades Among Investors in Equity Crowdfunding	132 equity offerings on Crowdcube in 2014, the UK
Vismara (2016b)	Equity retention and social network theory in equity crowdfunding	271 projects listed on Crowdcube and Seedrs in the period 2011–2014, the UK
Vulkan *et al.* (2016)	Equity crowdfunding: A new phenomena	636 campaigns from 2012-2015, the UK
Ralcheva & Roosenboom (2016)	On the Road to Success in Equity Crowdfunding	541 campaigns listed on Crowdcube, in the period 2012 -2015, the UK

Table 7 Summary of Key Literature. (Source: Author)

Currently there are only five key literatures that have statistically proven the success factors of an equity crowdfunding campaigns. The success factors are listed in the following table as an overview, as the foundation to reach the goal of creating an assessment tool for entrepreneurs.

4.2.2 Summary of Success Factors of Equity Crowdfunding in Different Literature

	Success factor		Author	Additional Comments on Sample Origins regarding to Conflicted Theories
1	Lower percentage of equity offerings	+ ***no***	• Vismara (2016a) • Ralcheva & Roosenboom	• 132 campaigns from CrowdCube in 2014, the UK • 541 campaigns from CrowdCube

		correlation	(2016)	2012-2015, the UK
2	More social capital	+ ***no correlation***	• Vismara (2016a) • Ahlers *et al*. (2015)	• 132 campaigns from CrowdCube in 2014, the UK • 104 campaigns from ASSOB, 2006-2011, Australia
3	More human capital	+	• Ahlers *et al*. (2015)	104 campaigns from ASSOB, 2006-2011, Australia
4	More intellectual capital	***No correlation*** +	• Ahlers *et al*. (2015) Ralcheva & Roosenboom (2016)	• 104 campaigns from ASSOB, 2006-2011, Australia • 541 campaigns listed on Crowdcube, in the period 2012 - 2015, the UK
5	Contributions in the early days of offering	+	• Vismara (2016a)	• 132 campaigns from CrowdCube in 2014, the UK
6	Investors with public profile	+	• Vismara (2016a) • Vulkan *et al.* (2016)	• 132 campaigns from CrowdCube in 2014, the UK • 636 campaigns from 2012-2015, the UK
7	Large investments	+	• Vulkan *et al.* (2016)	636 campaigns from 2012-2015, the UK
8	Awards, certifications, grants	+	• Ralcheva & Roosenboom (2016)	541 campaigns listed on Crowdcube, in the period 2012 -2015, the UK
9	Backed by VC or business angels	+	• Ralcheva & Roosenboom (2016)	541 campaigns listed on Crowdcube, in the period 2012 -2015, the UK
10	Younger company, already made a first sale, and located in a big city or lower the price of their shares during the pitch	+	• Ralcheva & Roosenboom (2016)	541 campaigns listed on Crowdcube, in the period 2012 -2015, the UK
11	Uncertainty, which means ambiguous information about the project	-	• Ahlers *et al.* (2015)	104 campaigns from ASSOB, 2006-2011, Australia

Table 8 Summary of success factors of equity crowdfunding. (Source： Author)

4.3 Assessment tool draft

Derived from the literature of success factors of equity crowdfunding, an assessment tool draft is developed before the interviews.

Success factors

It shows the summary of all success factors of equity crowdfunding available in the current literature in Table 8 Summary of success factors of equity crowdfunding. Interestingly, there are some

conflicted results. For example, success factor 1, 2, and 4 in the table 7 are conflicting. Some literature finds certain factor is success factor while some other literature did not find the significance in testing correlations.

For the success factor 1 in table 8, in Vismara (2016a) lower percentage of equity offering is positively correlated with success of a campaign, while in Ralcheva & Roosenboom (2016) there is no correlation tested. This is interesting, because both of the samples are from the UK. It can be future study to discover why it is like this.

For the success factor 2 and 4 in table 8, two samples from two literatures are from different countries. One is from Australian platform ASSOB, the other is from the UK platform CrowdCube. During the time frame of 2006-2011 when samples from ASSOB were collected, in Australia, the regulation did not allow non-accredited investors to invest yet. For every equity crowdfunding campaign, maximum 20 accredited investors are allowed to invest. So it cannot compare to the later evolution of equity crowdfunding in European countries and the US for example. Because of this reason, as the result, more social capital (success factor 2, samples from the UK) and more intellectual capital (success factor 4 from table 7, samples from the UK) are selected in the assessment tool.

Selection and revision of success factors to put into the assessment tool

In total, 11 success factors were derived from the 5 sources mentioned: Vismara (2016a), Vismara (2016b), Ahlers *et al.* (2015), Ralcheva & Roosenboom (2016), Vulkan *et al*. (2016). Some success factors need further discussion before putting into the assessment tool

Rating added: Based on the summary of success factors of equity crowdfunding from different literature, questions are phrased in the assessment tool. However, originally the presence or absence of each of the success factors can be determined with a Yes or No question. If an entrepreneur meets the criterion for a success factor, then it can be seen as positively correlated with the success of their equity crowdfunding campaign. To differentiate the score of this assessment tool, a rating scale of 1, 3 and 5 are selected. Rating 5 means a completely Yes that entrepreneurs have this success factor. Rating 1 means a completely No that entrepreneurs do not have this success factor. The intermediate scale of 3 is created to form a transitional stage between a completely Yes or No. Since possibly entrepreneurs are about to be issued patents, but it is in proceeding that there is no definite answer yet whether they have a patent or not.

Social Capital

The average of social capital in the research of Vismara (2016b) is 330 LinkedIn connections. it shows if the entrepreneur of the equity crowdfunding campaign has more social network, the higher chance it will be funded successfully. However, the research of Ahlers *et al*. (2015) shows there is no significant correlation between social capital and success of a campaign. Also, in literature review of reward-based crowdfunding, social capital does play a role in the success of a campaign. However, in this research, social capital is not chosen to the assessment tool. because 1) Vismara (2016b) only used number of LinkedIn connections to indicate social capital. It may vary depending on the countries. Maybe in some countries LinkedIn is more often used as a media to look for jobs. In some other countries LinkedIn is more often used as a tool for sharing professional knowledge, including investment opportunities. Vismara (2016b) used a sample from the UK. This assessment tool is for entrepreneurs in the Netherlands. 2) Conflicting results comparing to Ahlers *et al*. (2015). 3) From literature review of reward crowdfunding, social capital is a success factor without any doubt. However, equity crowdfunding is a very different type crowdfunding compared to reward crowdfunding. For example, motivations from investors why they invest are significantly different between equity crowdfunding and reward crowdfunding. So it is questionable whether social capital is a success factor based on the three reasons above. In addition, it is not possible to define a range of contacts on social media into three scales corresponding to the score 1, 3, and 5.

Intellectual Property

Even Ahlers *et al*. (2015) did not find evidence of a relationship between intellectual capital (measured as patents granted), and funding success of equity crowdfunding. This factor is still selected into the assessment tool draft, because 1) Ahlers *et al*. (2015) used sample from ASSOB from Australia during a timeframe when there is only accredited investors were allowed to participate, and each campaign there is a limitation of 20 investors. As accredited investors, they are more experienced and they are different from non-accredited investors. For non-accredited investors just like other research's samples, they are significantly different from accredited investors. They need more signals to evaluate their investment opportunities. 2) another literature from Ralcheva & Roosenboom (2016) confirms that intellectual property does have a positive correlation with the success of an equity campaign. 3) From literature review of reward-based crowdfunding, intellectual property is a success factor since most of the investors(backers) are non-accredited investors.

Uncertainty

From Ahlers *et al*. (2015), because an ambiguous information of a campaign is hard to measure and also hard to present in three options of score 1, 3 and 5.

Incubator

None of the key literature of equity crowdfunding tested in the sample of the Netherlands. In the Netherlands, situation can vary from the UK. Especially in the high tech sector, incubator or accelerator plays a very important role in the Netherlands. So in the Netherlands, incubator or accelerator also provide funding to start-ups (Climate-KIC Scout Report , 2017). Due to this reason, incubator can be named as a criterion in the assessment tool.

So success factor social media and uncertainty are not selected into the assessment tool. Intellectual property is selected into the assessment tool. Incubator is customised into the assessment tool.

A knock-out question is added as the first question in the assessment "whether entrepreneurs are willing to exchange equity for investment"

The assessment tool draft is derived. Please see Appendix C. Assessment tool -Draft

4.4 Interview Protocol

Preparation before the interview

Through contact information acquired at entrepreneurial events or through friends' references, contact appropriate candidates via LinkedIn/email. Introduce myself, explain the research topic, objective, and the assessment tool draft, and inquire about possible interest/possibilities of participating in interview session for verifying results from this research. More specifically, there would be one-hour interviews to get general opinions on seed-stage financing and on equity crowdfunding as an alternative method of financing for start-ups. In addition, feedbacks from interviewees on the draft assessment tool can provide real-life insights and updates to supplement the findings from available literature.

Also, one to two business days before the interview, the one page assessment tool draft should be sent via email for the interviewees to preview for a better understanding of the content of the interview and the outcome of this research.

In the interview

The whole interview would be conducted for one hour. Content of this one-hour interview, which consist several elements:

- Self-introduction, introduction to this research, purpose of the research, permission to record, confidentiality concerns (10 min)

- Interview questions (30-40 min):
  - Q&A of opinions and insights about seed-stage finance and equity crowdfunding, using the *interview questions* in the following section in the Appendix.
  - Feedback on the assessment tool, which includes: Does the scale of each category makes sense, do you have any recommendations or advice to improve this tool, any questions related to this tool, thoughts on whether this research is useful or applicable?

- Ending: Wrap up the interview, address any questions or note anything the interviewee would like to add, and express appreciation for the time of interviewees; confirm text and mention the possibility of follow-up questions after transcribing; ask if in the future it is possible to stay in contact for discussion. If they are interested, final soft copy of this research would be sent to ehm. (5 min)

After the interview

Send transcript to the interviewee via email within one week to verify their answers. Confirm in the email the participation would be anonymous. Finally, ask for referrals of other people they know who may be willing to provide insight for this research.

4.5 Interview Questions for Entrepreneurs

The main goals of the interviews are to:

1. Understand their preferences and reasons when it comes to seed-stage financing, and equity crowdfunding specifically, thus to give recommendations to platforms from entrepreneurs' point of view on improvement.

2. Validate and improve the assessment tool derived from the success factors from literature review. Hence, the understand ability and intelligibility of the assessment tool can be improved based on their feedback.

So, There are two parts to the interview questions. One part is developed through the literature review in Chapter 3, with the purpose of gathering opinions, first about seed-stage financing and then specifically equity crowdfunding, including concerns and recommendations to reduce the concerns from an entrepreneurs' point of view.

The focus of the second part of the interview is to get entrepreneurs to evaluate and give feedback on the assessment tool which was developed based on the equity crowdfunding success factors in Chapter 4.2.

In the interview, the list of traditional sources and alternative sources are provided to interviewees. See Appendix A and B for clear classification.

Part 1: Basic information about the start-up	
1	Confirmation of the company profile, for example: how old is the start-up? What sector/industry is the start-up in? What product/service does the start-up provide? Role of the interviewee.
Seed-stage funding sources and comparison	
2	What traditional funding sources have you chosen?
3	What alternative funding sources have you chosen?
4	Why did you (not) choose alternative funding?
5	What sources of funding are you considering choosing when you need money in the future (including traditional and alternative funding)?
6	What is your top three ranking of alternative funding sources and why?
Equity crowdfunding	
7	Are you familiar with equity crowdfunding?
8	Why equity crowdfunding is (not) on your top three list of alternative financing?
9	What are your concerns and how to reduce your concerns?
10	Do you know any entrepreneur who did (not) chose equity crowdfunding and why did (not) they choose it?
Recommendation	
11	How could one help entrepreneurs to choose equity crowdfunding and reduce their concerns?
12	Do you have any recommendations or concerns that can improve equity crowdfunding? This can be from the perspective of entrepreneurs, investors, or platforms.

Part 2: feedback of assessment tool	
13	What do you think of this tool? Is this tool easy to understand? If not, how can it be improved?
14	Does the category, success factor, and scales make sense to you?
15	What categories/factors do you think are also important but missing in this tool? What are they?
16	Do you think this research is useful or applicable in real life?

Figure 10 Interview Questions for Entrepreneurs. (Source: author)

5. Data Collection and Analysis

5.1 Introduction

Interview protocol (Chapter 4.3) is followed for semi-structured interviews for this qualitative thesis research. Interview candidates are selected based on the criteria (Chapter 2.4) in the methodology Chapter. Data are collected via semi-structured interviews and recorded in audio for further analysis. Data analysing process would follow a combination of methodology from Yin (2015) and Seidel (1998).

5.2 Data Analysis

5.2.1 Introduction

In this Chapter, qualitative data would be analysed in the sequence of interview questions. Before taking steps to start analysing interview data, an **overview** of each section of the interview would be provided, since data would be analysed parallel in the same question, sections or parts. According to the interview questions, there are two parts.

1. *First part* is about basic information about the company and general opinions of traditional financing and alternative financing, as well as future outlook and recommendation of equity crowdfunding. In this part, there are four sections.
    a. 1st section is about company profile
    b. 2nd section is about opinions from entrepreneurs on seed-stage financing, including traditional sources and alternative sources
    c. 3rd section is specifically about equity crowdfunding
    d. 4th section is about recommendations from entrepreneurs what they think equity crowdfunding platforms would be, and how they can attract them to run a campaign on equity crowdfunding platforms.

2. *Second part* of the interview is about feedback to improve the self-evaluating assessment tool for entrepreneurs.

According to Yin (2015), there are five steps to analyse qualitative data:

1. Compiling

2. Disassembling

    Based on the nature of semi-structured interviews, it is possible that:

    - Answers of certain question may not be necessarily answered right away, but in later relevant questions, because during interview processes, certain topics can trigger or inspire more opinions from interviewees throughout the conversation.

    - Or because of the open-ended questions, some answers may not be directly relevant to the question, and this content need to be reduced from final transcripts.

    - Or the repeated contents or answers in order to answer the questions, but not necessary. This content should be either marked more importance, or be reduced from final transcripts, based on the relevance of the answer to the question.

3. Reassembling

After step 2, the final transcripts should be reassembled together, with the same sequence of the interview questions, with direct relevance. The processed interview data are created in excel file to give a clear and unified understanding of what exactly the answer for each question.

4. Interpreting

By comparing each question with all the answers from interviewees, there are some patterns or similarities from interviewees. Why are some answers are the same, why are some answers not, it is the step to interpret the similar patterns and analyse the differences.

5. Concluding

The final step of the data analysis of qualitative research is to conclude the findings. Conclusions are presented in the following sub Chapter 5.3 results.

To further analyse data in *Step 4 interpreting* from above (Yin, 2015), a complementary theory from well-referenced article *Qualitative Data analysis* from Seidel (1998) will be applied in *interpreting* part of step 4 from Yin (2015). See figure below:

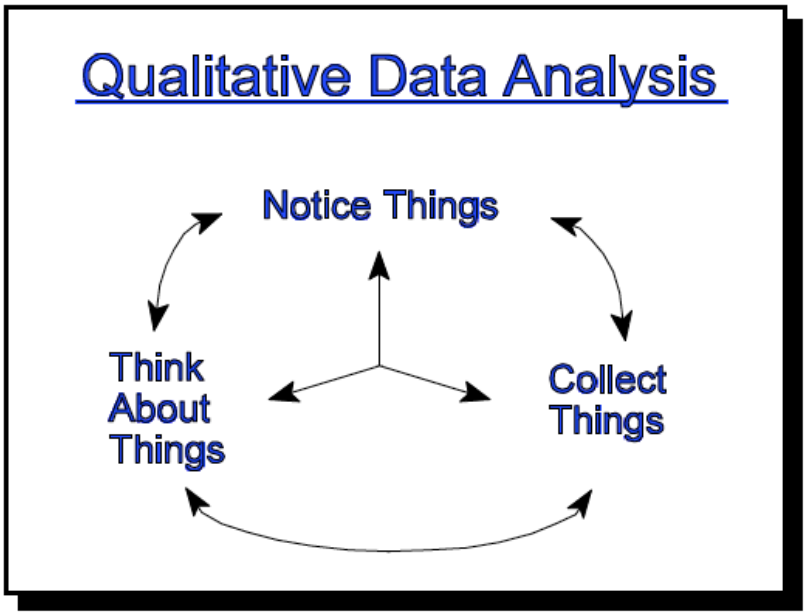

Figure 11 The Data Analysis Process. (Source: Seidel 1998, page 2)

The reason to choose this methodology (Seidel, 1998) for supplementing methodology from Yin (2015) is because this methodology does not require computer software to code data, and the concept of the iterative and progressive process of analysing qualitative data is a good fit for this research to find trends and patterns. Instead of using coding strategy to count repeated key words, the concept of noticing

interesting things as an intuitive reflection to analyse different interviews as a whole is flexible and applicable. Rigidity of counting repeatable key words may not necessarily reflect the importance or emphasis of certain information, since it depends on each interviewee's personality; repeating does not necessarily always reflect the importance. Depending on the context and tones, interpreter from the audio can have an intuitive judgement what information is the key information, what information is the main reasons of entrepreneurs not to choose equity crowdfunding, even the entrepreneur does not have to repeat the reason multiple times verbally.

So combining methodologies of Yin (2015) and Seidel (1998), the following steps are to take for this research.

1. Interviews are recorded into audio files, following the interview protocol and interview questions.

2. Transcribing the entire conversation into text.

3. Dissemble the answers and rematch them with the appropriate questions accordingly. This step requires intuitive judgement to interpret the meaning from the interviewee in that context. The repeating content would be deleted from less relevant interview questions. Sometimes for open-ended question, the interviewee may keep on talking about answer from following questions, before the question is even asked. In this case, the dissembling and resembling is important to relocate the answer to the best-fitted questions.

4. Shifting the essential and relevant information of the answer into a excel form. So it is easier to compare answers for the same question among all interviewees.

5. For key questions, methodology of Seidel (1998) would be used, to *notice interesting things, collect things, and think about things*. See Figure 11 The Data Analysis Process. (Source: Seidel 1998, page 2)

6. After *thinking about things* Seidel (1998), generalising the phenomenon (the interesting things noticed) and looking for available literature to explain this phenomenon are the next steps, to see whether there is literature to confirm the generalisation of this phenomenon, thus possibly to apply to a larger population from the sample. Or it raises questions for future study to confirm the *interesting things noticed* during step 5 above.

7. Reporting and concluding.

5.2.2 Analysing Part 1 of the Interview:

Section 1 Interviewees' profile:

Company and interviewee basic information							
Name	**T**	**S**	**Y**	**B**	**R**	**JD**	**JL**
Type	B2B	B2B	B2B	B2B	B2B	B2C	B2C
Incubator or not	Yes	Yes	Yes	Yes	Yes	No	Yes
Age	1.5 years old	1.5 years	5 months old	1 year old	1 year old	1.5 years old	1 year old
Setup	Solo founder	2 founders	2 founders	2 founders	4 founders	Participated reward-crowdfunding on July 2016	4 founders
Product type	Industrial product in energy	Product - office/factory building use	Software as a service to company	Healthcare product hospital-use	Product - industrial use	Product-domestic use	Healthcare product personal-use

Table 9 Company and interviewee basic information. (Source: Author)

Due to the availability of entrepreneurs during the data collection period, in total, there are 7 interviews from start-ups in technological sector in the Netherlands for this research. Among these 7 start-ups, the average age of the start-ups is *about one year old*, which fits into the interviewee criteria in this research. Among these 7 start-ups, 5 of them are in B2B business, 2 start-ups are in B2C. 6 of them are in TU Delft technological incubator Yes!Delft, the other is not in any incubator. See Table 9 Company and interviewee basic information. (Source: Author for more information.

Within these 7 entrepreneurs, one of them has participated reward-based crowdfunding, which is a start-up provides B2C product. However, the campaign did not reach their target of fundraising on Kickstarter last time. So they would re-launch another Kickstarter campaign later based on the lessons learned from the previous campaign.

Among those five B2B start-ups, one develops battery-free sensors in office buildings that can receive Wi-Fi signals to charge; one develops an equipment installed in chimneys from factories to turn heat into electricity; one develops a medical surgeon instrument to better assist surgeries with an exclusive patent licencing from TU Delft; one provide software as a service (SAAS) to corporates to analyse big data and better help corporates to make business decisions; the last one, who develops a gearbox without gears but

using friction to create transmission, that can be used in robots or vehicles. This start-up also has an exclusive license with TU Delft to use this patent.

Regarding the other two B2C start-ups, one develops a smart lock for household use without a key but by fingerprint. Another one develops a pillow that consumers can hold to fall asleep faster, by installing a motor inside to mimic the breath pattern of human during sleep.

To maximize the use of all the interview data available from those 7 entrepreneurs, comparisons of *B2B vs. B2C*, *Incubator vs. Non-incubator* will be categorised to find general patterns of each question for the following sections of analysing data. However, there are 5 B2B and 2 B2C. 6 from incubator and 1 is from non-incubator. The generalisation is arguable but based on the sample collected. It is still worth presenting the result. The generalisation part will be further discussed in Chapter 6 Conclusion.

The following section will be applying Qualitative Data Analysis (QDA) process from Seidel (1998) as shown in Figure 11 The Data Analysis Process. (Source: to better interpret the qualitative interview data. In the following sections of the data analysis, the steps of first noticing interesting things, then think and collect patterns, in the end, explanation would provided to confirm why the pattern is like this.

Section 2 Seed-stage funding sources and comparison:

Noticing interesting things: Government subsidies' role in traditional finance.

Pattern:

> 4 out of 5 B2B start-ups have received government subsidies. Also, 1 out of 2 B2C start-ups have received government subsidies. In other ways of analysing it, 5 out of 6 start ups from incubator Yes!Delft have received government subsidies. The one from non-incubator environment did not receive government subsidy. So in total, 5 out of 7 interviewees have received government subsidies as traditional finance. On average, the amount of government subsides weigh more than half of their funding individually. Even 1 start-up only has government subsidy so far, without any other forms of traditional financing and alternative financing.

Explanation:

There are abundant government subsidies available for start-ups in technological sector in the Netherlands. There are ones from European-level, national level and regional level. Some government subsides are grants, which is free money that entrepreneurs do not have to pay back. Some are government loans with soft terms that entrepreneurs can pay back several years later, or if the start-up fails, entrepreneurs do not have to pay back.

Noticing interesting things: innovation awards/competition in traditional finance

Pattern:

Three out of 7 start-ups have listed innovation awards and competition as one of their funding sources, in which 2 are from 5 B2B businesses, 1 is from 2 B2C businesses. Those 3 are all from Yes!Delft incubator. Among these 3 start-ups, 1 of them listed awards prize as their primary resource of funding, which means the prize money takes more than 50% of their current seed-stage financing.

According to one of the interviewee S, *"Innovative competition can not only give us media attention but also validate our product in some way, because usually there are juries of experts. If they say it is really good, other companies will think they are good. Maybe we should do something with them. So it is easier to get a meeting with CEOs or Chief innovation officers."* (Interviewee S. Date of interview: June 25, 2017) Another interviewee J also mentioned almost exactly the same. *"It is really nice because awards are just money and you get the publicity and there is assessment on your idea"* (Interviewee J. Date of interview: March 28, 2017).

Here are some examples for a better indication of how awards money plays a role in the start-up financing in the Netherlands. For company of S, for one competition alone they received 25K. For company of J, in total they received 60k of prize money.

Explanation:

In the Netherlands, government as well as cooperates stimulate innovative entrepreneurship by granting subsidies and competitions. Especially for healthcare technological sector, there are even more subsidies in the Netherlands, and in European level.

However, originally from the literature review, for seed-stage financing, there is no award money mentioned. But in the Netherlands, where the government really promotes innovation and

entrepreneurship, awards money can actually be a good source of seed-stage source of income. Since this research is focused in the high-tech sector of start-ups, there are different types of competition start-ups can participate.

Section 3 Equity Crowdfunding

Noticing interesting things: Convertible loan

All entrepreneurs know a Yes!delft company called Bolt Mobility raised money from equity crowdfunding. However, technically it is not traditional equity crowdfunding that are discussed from literature review. It is an even more emerging phenomenon of equity crowdfunding. Bolt Mobility raised money from Leapfunder, which is an angel network in the Netherlands that provide convertible loan (note) to entrepreneurs and convert into equity at some point to investors. In the case of Bolt Mobility, they raised money with a minimum investment per ticket as much as 100,000 euro, which means every investor can invest 1 ticket (100,000 euro) as minimum investment or multiple tickets (multiples of 100,000 euro).

Pattern:

Convertible loan is the new trend for equity crowdfunding. In the Netherlands, when this thesis was at literature review stage in late 2016, at that moment the Netherlands local platform of equity crowdfunding Symbid only provided mainstream equity crowdfunding campaign. Later in early 2017, Symbid started to provide two types of investment, equity crowdfunding and convertible loan.

Explanation:

From author's point of view, convertible loan is going to be the future trend of equity crowdfunding. Taking Bolt Mobility and Leapfunder platform as an example, Leapfunder is the crowdfunding platforms that only provides convertible loan. Bolt Mobility is by far the biggest campaign on Leapfunder, which raised more than 3 million euros in two rounds. While comparing the biggest campaign on Symbid success stories' page, it is 460,000 euros from Lendahand debt-based crowdfunding platform.

One big advantage of convertible loan is that there is no valuation needed at the moment of investing. Firstly the money raised is taken as a loan from investors. Then at a later stage, when the

new round of investment needed, the investors can convert into equity with a discount, which gives more time to start-ups to grow their businesses and provide a more accurate valuation.

Because at the moment of raising money from the crowd, the start-ups usually at very early stage of their business cycle, which means, valuation for start-ups can be very hard. At this point, a high valuation of the same company means less equity in exchange to get same amount of money. When investors from the crowd evaluating an equity crowdfunding campaign, if they think the valuation is too high, in other words, the equity amount offered is lower than they think, they would probably pass this investment opportunity. So the campaign can possibly not be funded successfully if a lot of investors think about the same valuation issue.

Noticing interesting things: why not to choose equity crowdfunding

All interviewees from this research are the ones who are hesitant to choose equity crowdfunding.

Pattern:

There are three main reasons why entrepreneurs prefer not to use equity crowdfunding:

- Equity crowdfunding is not smart capital. There is no knowledge and network provided from the crowd. Entrepreneurs prefer to exchange their equity with value-added services for the same amount of equity exchanged.

- Start-ups prefer to get free money first, then a loan, then exchanging equity. “Free money” means the money you get it for free, which includes government subsidies, innovation funds, and innovative competition prize money. Entrepreneurs generally avoid exchanging equity at the early-stage of their businesses, because the valuation of the start-up is usually low. It means that if they wait for later when valuation is higher, they can get more funding for the same amount of equity exchanged.

- Only when start-ups cannot get funding from traditional investors (venture capitalist or angel investors), they would consider equity crowdfunding or peer-to-peer business lending if they cannot get bank loans, etc.

Section 4 Recommendations

Noticing interesting things: knowledge and network

There are other synonyms related to the concept of knowledge and network. Also, interviewees mentioned about "value-added services", "smart capital", and "expertise"

Pattern:

5 out of 7 entrepreneurs have mentioned about smart money or the value-added part of investors, such as knowledge and network for example attached to the money invested. All Yes!Delft entrepreneurs (6 out of 7 interviewees) have mentioned that they would prefer to have investment with network or knowledge at the same time.

Explanation:

These respondents are comparing traditional investors (VC and angel investors) with equity crowdfunding investors. They are all from Yes!Delft (6 out of 7), in which 5 of them are B2B, 1 is B2C. But they all list Venture capital and angel investor as their preferred resources of financing comparing to equity crowdfunding.

Possible explanation is for high tech industry, or from Yes! Delft incubator, there are opportunities organised by incubator to meet VC and angel investors. From Yes!Delft training program they were infused with the preference of financing is always free money first (government subsidies) and as less loan as possible, then at the same time pursuing VC and angel investors. "Equity crowdfunding is not named as an option in their training program in Yes!Delft".

Noticing interesting things: possible hybrid financial instrument with government subsidies or venture capital

Pattern:

3 interviewees mentioned that equity crowdfunding could possibly collaborate with other financial sources such as government subsidies, venture capital and bank loans to reduce the risks for investors and provide more funding to entrepreneurs.

5.2.3 Analysing Part 2 of the Interview:

Feedback for Improving Assessment Tool

Noticing interesting things：B2B vs. B2C when it comes to choose Equity crowdfunding

There is one interesting thing during data transcribing process, which is in general almost all interviewees mentioned that B2B or B2C product type would matter in crowdfunding campaign.

Pattern:

Almost all interviewees from B2B (4 out of 5) think it would be easier to raise money on equity crowdfunding if they have a B2C business model.

But All B2C (2 out of 2) thinks they are suitable for reward crowdfunding and they are actively looking for raising funding from reward based crowdfunding website, instead of approaching equity crowdfunding.

Explanation:

Academic research can confirm this thought from entrepreneurs. Indeed according to Lukkarinen *et al.* (2016), understandability of a company's concept or offering plays a role in the funding success. "Equity crowdfunding campaigns of companies providing more understandable offerings are more successful." (Lukkarinen *et al.* 2016).

Noticing interesting things: The meaning of the score

Pattern:

4 out of 7 interviewees have questions about the score. They do not understand why the scale of 1,3,5 were chosen and 3 out of 7 interviewees suggest not showing the score to the entrepreneur when taking this questionnaire. The score can be showing after they finishing the assessment tool.

Also the same 4 people would like to have a result of their questionnaire, in what score range it means they are strongly recommended to participate equity crowdfunding, and in what score rage they are not recommended to participate equity crowdfunding.

After explaining to those interviewees who have questions about the scores, they can understand it is a pre-screening tool to help entrepreneurs not to waste their time when it comes to choosing equity crowdfunding as a source of financing or not.

2 out of 7 interviewees would like to see a bigger scope of this research, which can benefit entrepreneurs to pick right funding source including reward-based crowdfunding, debt-based crowdfunding, donation-based crowdfunding, or even expand outside of crowdfunding umbrella, to government subsidies, bank loans,

"So this tool is almost like a readiness indicator, it is not a success guarantee of this score, but there is a readiness indicator." Interviewee B. (May 25, 2017)

5.3 Results

5.3.1 Results on Seed-stage Traditional Financing:

1. Government subsidy:

From section of seed-stage funding sources of the interview data analysis, it is possible to draw the conclusion that, technical start-ups from technical incubator in the Netherlands are more likely to receive government subsidies, since to be able to join incubator, start-ups have already met certain evaluations of innovativeness and validation for business plan or market value.

There is only one sample from non-incubator start-ups so it is not representative enough to show non-incubator start-ups have difficulties to get government subsidies. However, it can be explained, incubator can provide mentoring and other value added services to start-ups, that can lead to a higher chance of receiving government subsidies.

In this research, government subsidy includes two types of money. One is free money from Netherlands government that the recipients do not have to pay back. The other one is government loan,

which normally is the second phase (according to interviewees of this research from start-ups from technological sector in the Netherlands) of government subsidy. After free money, second phase is a loan provided by government with soft terms, for example, entrepreneurs do not have to pay back 2 or3 years later and after 3 years if the payment cannot be made, it is possible to extend. However, interest on government loan is higher than commercial bank loan, since the risk is higher for funding start-ups. Also, most start-ups before they show evidence of consistent cash flow, they are not qualified for getting commercial bank loan.

Among 7 start-ups in interviews for this research, 4 of them have chosen and successfully got government subsidies. Some entrepreneurs got free money, which is a small amount such as 10k Euro for the first phase of Netherlands government subsidies. Some entrepreneurs got the second phase of the government subsidies, which is a loan with much larger amount than phase one, such as 250k, 350k euro, according to interviewees in this research.

So from this study during seed-stage, the government financing plays an important role to stimulate and sponsor innovation and entrepreneurship. It is the most commonly chosen financial method among other funding sources, including traditional funding sources and alternative ones.

One start-up used solely government subsidy. Actually it takes some time to apply government subsidy. He set up the company after he was granted government subsidy.

2. Innovation competition/awards

Three out of 7 start-ups have received innovation competition and awards, which include price money and media coverage. They are all from incubator.

3. Corporate investment

A tech start-up has funding solely from a corporate investment. The funding is sufficient at the moment and they start making revenue so they are self-sustained already. Due to the nature of their business, which is software as a service (SAAS), they may need less R&D time comparing other tech start-ups, which are developing a product with a disruptive technology.

4. VC or Angel investment:

2 out of 7 start-ups have received angel investment. They think the angel investors can bring their network and knowledge to help their companies to grow faster.

None of the start-ups in this research have received any venture capital.

All of them are considering VC or angel investment for future fundraising.

However, to further develop or scale up the start-up, almost all entrepreneurs who have successfully got government subsidies, would prefer to pursue venture capitalists *or* angel investors for future rounds of investment, due to their value-added services input, such as network and expertise on certain fields.

5.3.2 Results on Seed-stage Alternative Finance:

From the interview analysis, following two reasons are summarised as below to explain the reasons why start-ups choose alternative financing:

1. Crowdfunding saves time on approaching investors individually. By setting up a campaign on Internet, it allows investors from the platform to get access. Entrepreneurs can focus on developing their own business instead of spending time repeatable on meeting different professional investors. Especially for start-ups that founders are more technical, they would or probably also should spend more time on their business.

2. Besides concerns of spending too much time on approaching traditional investors like VC or angels, crowdfunding platforms can also share their database of investors to the entrepreneurs who are running campaigns on their websites. So it creates a new pool of retail investors to entrepreneurs that it would be hard to reach from entrepreneurs originally.

Also, there are two reasons for start-ups *not to* choose alternative financing.

1. Because of abundant government subsidies for tech start-ups, they have not felt the need to try alternative finance methods, such as crowdfunding.

2. Also because of the lack of awareness of details about how crowdfunding works, some basic information about equity crowdfunding is lacking from the entrepreneurs. For example, one

entrepreneur worries about managing investors from the crowd but actually crowd does not have voting rights in the company. Since equity crowdfunding is a fairly new phenomenon, also new to entrepreneurs. They do not have access to get to know more about equity crowdfunding. The 6 interviewees from Yes!Delft incubator, have not received any information regarding coaching/awareness on equity crowdfunding. The responsibility of promoting equity crowdfunding solely lies on the shoulder of platforms.

5.3.3 Results of Preference on Seed-stage Alternative Financing among Tech Start-ups:

From all the interviewees, the preference is more or less similar. See following table for an overview of their preferences.

	T	S	Y	B	R	JD	JL
Preference of alternative funding sources							
Company info	B2B	B2B	B2B	B2B	B2B	B2C	B2C
Age	1.5 years old	1.5 years	5 months old	1 year old	1 year old	1.5 years old	1 year old
Incubator or not	Yes	Yes	Yes	Yes	Yes	No	Yes
	Industrial product in energy	Product - office/factory building use	Software as a service to company	Healthcare product hospital-use	Product - industrial use	Product-domestic use	Healthcare product personal-use
Preference	1. Donations 2. Business lending	1. ***Equity crowdfunding,*** if the speed of raising money is faster than formal investors	1. P2P business 2. Debt crowdfunding 3. ***Equity crowdfunding***	1. Donation crowdfunding 2. Reward crowdfunding 3. ***Equity crowdfunding***	1. Donation crowdfunding 2. Reward crowdfunding 3. Business lending	1. Reward crowdfunding. 2. Consumer lending 3. ***Equity crowdfunding.***	1. Reward crowdfunding 2. ***Equity crowdfunding*** 3.Business lending

Table 10 Summary of Preference on Seed-stage Financing. (Source: Author)

The preference of funding sources from all entrepreneurs can be summarised:

Government subsidies, innovative competition prize money> loans > VC or angels> alternative financing

In alternative financing it varies from business to business:

- Donation-based crowdfunding is the best option based on the concept there is no debt and no equity exchange involved, so even interviewees who do not think they may raise funds successfully on donation based crowdfunding, the concept of free money make them list donation based crowdfunding on the top of crowdfunding family.

- Reward-based crowdfunding is the second best option if the start-up provides a consumer-based product. The concept of pre-ordering the product, and using the raised funding to further develop and mass-produce the product, is popular by entrepreneurs if they have a consumer-based product. If not, entrepreneurs would choose debt-based crowdfunding or equity crowdfunding.

  Reward-based crowdfunding can validate the business idea as well as raising money to realise this business idea. 1 out of 7 interviewees has actually participated reward-based crowdfunding but failed. However, he is willing to better prepare and re-launch the campaign soon. Another interviewee whose company provides a consumer health care product, he is ready to launch a reward-based crowdfunding campaign soon as well, because he believes he has good coverage on the media and already built an online community on their official website who would like to pre-order the product once it is online.

- Debt-based crowdfunding is not familiar by the entrepreneurs in this research even though in the Netherlands it has the highest volume in the crowdfunding family. Possible explanation can be in high-tech sector in the Netherlands, entrepreneurs having abundant sources of government subsidies to apply, which include the non-repayable grant and the soft government loans.

5.3.4 Results of Equity Crowdfunding:

The common reasons for the start-ups *not to choose equity crowdfunding* are summarised as below from an entrepreneur's point of view:

Equity crowdfunding is not "smart capital", which means it does not provide network, knowledge, or expertise as traditional formal investors do, such as venture capitalists and angel investors. Entrepreneurs in high-tech sector in the Netherlands, normally (6 out of 7 interviewees) would get government subsidies including government loans, innovative competition awards, as their initial seed-stage financing. Only one interviewee and his cofounders founded everything by themselves.

- This interviewee is the only one from 7 interviewees who are not in an incubator program.

- Also an interviewee from healthcare sector would prefer to participate a high-tech start-up focused equity crowdfunding platform, instead of competing with other campaigns that are not high-tech oriented. He would not want to ruin his reputation by listing a high-tech health care product in the same platform where someone is raising money for brewing a special beer, since, as matter of fact, food & beverage is a popular industry to raise money on equity crowdfunding platforms.

- Voting rights

  From platforms' point of view, they would like to claim investors have voting rights. However, from the entrepreneurs' point of view, they think it is might be a challenge to manage the opinions from the crowd. In other words, they would prefer to invite investors who have insights about their industry or products to get more involved with their business, maybe even being invited on board, but they would not appreciate to give voting rights to everyone, who may not even understand their vision or technology.

5.3.5 Results of Recommendations for Equity Crowdfunding:

Network and knowledge, were frequently heard from different interviewees. Synonym of *network and knowledge* mentioned in the interviews are: *smart money, smart capital,* and *expertise*.

4 out of 7 entrepreneurs believe that if equity crowdfunding platforms can enable a function for investors from the crowd to offer their network and knowledge or expertise to help start-ups to grow, then they would like to participate in equity crowdfunding. Also related to network and knowledge, 2 other entrepreneurs did not mention the key words network and knowledge, but they also try to make a point about investors' profile. One entrepreneur would like to get to know investors who they really are, what they do, instead of letting anonymous people buying a small share of his company. 2 entrepreneurs would only want to show their campaign to certain target investors, who have knowledge and network and who can understand the potential of their concepts of businesses. Since on one hand, crowdfunding platforms serve a function to validate their business ideas from the public, if it is a more understandable concept of offering according to Lukkarinen *et al.* (2016). However, on the other hand, *some entrepreneurs does not prefer to publicize his fund raising activities when he can approach traditional formal investors individually*. So he would only want to show his project to certain investors, which would be his preference to participate on an equity crowdfunding platform, if this function is supported. Also the same entrepreneur would only

participate an equity crowdfunding campaign if other campaigns he/she is competing with were quality projects. So he can look more professional, instead of listing his campaign next to silly ideas and “looks like a fool”. He agrees equity crowdfunding can be easy money, by having big investors invested right away when campaign started, so very possibly the rest of the crowd would follow. Be would like to participate on an equity crowdfunding platform on a more specialised niche market that only allows high-tech projects on there. The entrepreneur had one condition on his participation; the equity crowdfunding platform should allow niche markets having high tech projects.

One interviewee indicated that if equity crowdfunding can help raising money very fast, faster than venture capital, less than 6 months, he would be willing to participate an equity crowdfunding campaign. So suggestions to platforms, if they can offer very fast investment from the crowd, then it is possible to attract more entrepreneurs.

Also one interviewee indicated the possibility of equity crowdfunding platforms in collaboration with traditional funding sources, such as government subsidies, VC or angel, or small investment apps on smart phone, would be more attractive to entrepreneurs to raise money on equity crowdfunding platforms.

Since an instrument of VC-Bank mix funding instrument already exists in the market of the Netherlands. Future possible trend can be further collaboration from equity crowdfunding platforms with VC or banks so that risks from all parties can be reduced but entrepreneurs get more funding as return.

Currently, a Government-bank mix funding instrument exists in the Netherlands already. There is a bundle of government subsidy and bank loan that if the company cannot repay the bank loan, government will repay the bank part of the loan to encourage banks issue loans to start-ups in the Netherlands. Similarly, for future trend or outlook of equity crowdfunding, it is possible to combine with government subsidies in some way, that government funds can also be put into the funds of equity crowdfunding websites, to stimulate innovation and create jobs in start-ups to reach economic goals from government point of view.

Also, a VC-equity crowdfunding-mix funding instrument exists currently in the UK, such as Seedrs. The hybrid of VC and lead investors, in most cases, angel investors, can attract more individual investors from the crowd, since the professional investors serve a positive signal to the crowd this project is trustworthy. If hybrid of VC and equity crowdfunding is possible, how about a hybrid of government subsidies and equity crowdfunding? It can be a future trend and it is possible to become true in real life.

5.3.6 Results of Feedback on Assessment Tool:

The final result of this assessment tool for entrepreneurs is attached in the Appendix D. Assessment Tool –Final Version. But first this tool was developed through literature review to get an overview on success factors available and then this tool was verified and improved based on the feedback from the interviews.

All 7 interviewees think this assessment tool is easy to understand. However, 5 out of 7 interviewees asked questions about the score scale of 1,3,5, in which, 2 interviewees prefer not to show the score until the assessment is finished. They did not understand why the score of 1,3,5 are chosen and what the total score means if they finish the assessment. After the origins of all success factors are explained, entrepreneurs understood those success factors are from different researches, different samples. There is no absolute meaning of a total number, whether any specific score means they are recommended or not recommended to participate in an equity crowdfunding campaign.

All 7 interviewees think this research is applicable in real life to provide insights to entrepreneurs about a successful equity crowdfunding campaign.

For interview question whether they think there is some success factor missing, 5 out of 7 interviewees thinks whether the business type is B2B or B2C would make a difference on equity crowdfunding success, that B2C business type can be easier to get funded successfully. 1 interviewee thinks B2B business type does not make a difference on raising money on equity crowdfunding platforms. By confirming with literature of (Lukkarinen, Teich, Wallenius, & Wallenius, 2016), they did mention the understandability is a factor to influence funding success of equity crowdfunding. If a business concept or offering is too complex from a consumer's point of view, they may not invest via equity crowdfunding. In this research, they marked B2B and B2C as dummy variables. As a result, they did find a correlation of B2C business type is easier to be funded on equity crowdfunding campaign.

So as a result, the B2B or B2C type should be added to the final assessment tool. Please see Appendix D. Assessment Tool – Final Version for the revision.

2 interviewees have questions about equity exchange in terms of percentage, since how much money they need is pre-determined, and then based on their valuation of the company, percentage of the equity is calculated. Based on the previous literature review in Chapter 3, for successful equity crowdfunding campaigns, the less equity in exchange, the more change the campaign is going to be successful. However, due to the small sample of the related research, from the research of Vismara (2016)

and Ralcheva, & Roosenboom (2016). It is hard to provide an indication for equity exchange in a scientific way to define score scale of 1,3,5 in the assessment tool, even from two literatures, the average equity in exchange is 16.1% (Ralcheva & Roosenboom, 2016) and 13.6% (Vismara, 2016). What we know is, the less equity in exchange offered, the more likely the campaign is going to be success. It shows the confidence of the owner for the start-up, which serves as a positive signal to investors. However, based on the interview feedback of the assessment too, it is also matters how much money the entrepreneur intends to raise. **So based on valuation of the company and target of fundraising, and limited research about equity retention, in the assessment tool, the percentage of equity exchange is replaced by B2B or B2C business type.** Please see assessment tool final version in the Appendix.

5.4 Conclusion

In this Chapter, qualitative data is analysed to show the pattern of same questions among different interviewees. To summarise answers why entrepreneurs are hesitant to choose equity crowdfunding, there are some patterns below:

1. There are abundant government subsidies supplied to innovative start-ups in the Netherlands, which includes free money and soft loans.

2. There is also innovative awards money that is ideal source of funding for start-ups, since it means free money, publicity and validation from experts in the industry.

3. Convertible loan is arising. Equity crowdfunding is still developing. If entrepreneurs opt for equity crowdfunding in the future, the form of convertible loan under equity crowdfunding umbrella would be preferred. The biggest reason why convertible loan gets popularity is that it does not require valuation of the start-up at the point when the campaign is launched. Investors can convert the loan into equity later under certain discount when the start-up gets the next round of funding in the future. On the other hand, investors can see the start-ups has a future plan of growing for further investment rounds, and investors can expect to cash out in certain years. While for conventional equity crowdfunding, investors either accept or reject the offer from entrepreneurs how much equity exchanged for how much funding based on the valuation of the start-up. It is hard to estimate the valuation for start-ups because most of them do not have revenues. Also, investors for conventional equity crowdfunding can cash out most often when there is an acquisition, or initial public offering. Both chances are quite slim. Biggest chance is that the start-up would go bankrupt, maintain break even or slow growth.

To summarise recommendations on how to attract more entrepreneurs to participate on equity crowdfunding platforms, there are some patterns below:

1. Network and knowledge. If equity crowdfunding can also provide network and knowledge from the crowd somehow, it would attract much more interests from entrepreneurs' side.

Since at the moment for high-tech start-ups in the Netherlands, there are plenty of subsidies from government (European level, national level, and regional level) for high tech start-ups to apply. From this point of view, equity crowdfunding is not the ideal source of finance, since start-ups at seed stage or early stage, there valuation is low, the capability to proof their business ideas is low, if they try to raise money by exchanging equity, they would not raise so much money, due to the low valuation of the start-up. So comparing free money, such as *government subsidies*, *government sponsored loans* with favourable terms to innovative start-ups, and *innovation competition prize* money, entrepreneurs prefer to choose the money that they do not have to exchange equity, until they grow bigger and more capable of prove their business ideas into the market. However, at this point, quality start-ups who have a strategy and who are ambitious of aiming at initial public offering (IPO), they would skip equity crowdfunding and directly pursue venture capital or big angel investors, because equity crowdfunding as an alternative finance, the average campaign size is 138,228 GBP in the sample of 636 campaigns on a UK platform Seedrs according to Vulkan *et al.* (2016).

2. Attract funding beyond the crowd

From semi-structured interviews, there are some possible sources of funding that equity crowdfunding platforms can work with. Two possible hybrid financial instruments can be applied based on the insights provided by the entrepreneurs. Both solutions can reduce risks from crowd to invest in seed-stage start-ups, also utilise current existing mechanism from government subsidies to stimulate innovation.

It is possible for equity crowdfunding platforms to collaborate with government subsidies in the Netherlands. For an application of government subsidies and equity crowdfunding hybrid, it is possible like this: If the campaign's target can be achieved successfully, government would also invest the same amount of money as a loan to share the risks of the investment from the crowd. So it doubled the investment originally it would acquire only from the crowd. Since currently the government is already providing abundant amount of subsidies, or provide incentives to Robabank to give loans to start-ups. Government would pay back 2/3 of the loan if the start-up fails. So it reduced big part of risks from a commercial bank loan to start-ups. With the publicity of equity crowdfunding, and the power of crowd wisdom, government collaboration or intervention as a third-party to equity crowdfunding platforms, can reduce information

asymmetry between entrepreneurs and investors that can be biased by platforms, and also can fund projects are that are selected by platforms and use platform as a screening system to make better decisions as well. Currently for applying most of the government subsidies, high tech start-ups just need to apply with a written proposal. With the help of equity crowdfunding platforms, and the crowd investors, government probably can choose more projects to fund. However, the government subsidies are only focusing on innovative start-ups. While in equity crowdfunding platforms, the innovative projects only take a small part of the entire campaigns.

There can be also a possibility of a hybrid investment among venture capital, bank loan, and government subsidies with equity crowdfunding together. According to interviewee R, he is applying a Rabobank loan, which is sponsored by Netherlands government. “If we can manage to get investment from venture capital first, Rabobank is willing to give us a loan. If I try to raise 1 million right now, I can ask for 750-800k from a VC. If I get money from VC, Rabobank is willing to give us a loan, for 200k.” “If we do not get a VC we do not get a loan from Rabobank. The benefit of this instrument is that start-ups only exchange equity for 80% of the total amount of money raised. So I exchange less equity for the same amount of money. Similarly, if the start-ups get funded by equity crowdfunding, then government also provide incentive for Rabobank to give a loan (20% of equity crowdfunding funding) on top of a successful equity crowdfunding campaign. It would be the same for the government to stimulate innovation, and also the same to benefit start-ups, but via equity crowdfunding instead of VC.

6. Conclusion and Recommendation

6.1 Conclusion

From literature review, as well as qualitative data collection, the preference of start-up financing is understood. Equity crowdfunding is understood in the context of the Netherlands. The gap of equity crowdfunding between the Netherlands and the UK are compared. Most importantly, the information asymmetry between entrepreneurs and platforms, and between entrepreneurs and investors is mitigated. The information asymmetry between entrepreneurs and platforms is mitigated by interview input by entrepreneurs. It presents recommendations to platforms what entrepreneurs’ concerns are when it comes to equity crowdfunding. An assessment tool mitigates the information asymmetry between entrepreneurs and investors. It is a pre-screening tool and a readiness indicator for entrepreneurs to decide whether equity crowdfunding is suitable for them.

RQ 1 **"How to make equity crowdfunding more attractive to entrepreneurs?"** is answered step by step in the following sub questions.

Sub question 1: "**How is Netherlands equity crowdfunding industry doing in the European context**?"

In Europe, the Netherlands is ranked the third in equity crowdfunding behind France and Germany in 2015. The volume of France (€75 million) is five times as much as the volume in the Netherlands (€17 million) in 2015. This ranking is excluding the UK because the UK is the market leader of equity crowdfunding in the Europe by far. It has been growing drastically for the previous years. In 2015, the volume of equity crowdfunding in the UK ((£332 million) is more than 20 times than the Netherlands (€17 million).

Sub question 2: "**What is the preference of seed-stage financing from an entrepreneurs point of view**?"

Government subsidies, innovative competition prize money > loans >VC or angels> equity crowdfunding

In general, the preference for seed-stage funding sources for entrepreneurs is that free money first. It is the best funding source. It includes government subsidies, innovative competition prize money. Then the preference goes to loan, because there is no equity in exchange. Only when the start-up grows to certain point the valuation of the company is high enough, entrepreneurs would like to exchange some equity from professional investors, such as VC or angels, who can provide their expertise to help the start grow. Only when entrepreneurs fail to attract VC or angels, they would consider equity crowdfunding.

The preference of alternative financing was asked to entrepreneurs. The answers vary from business to business. 5 out of 7 interviewees listed equity crowdfunding as 1 of the top 3 options of alternative finance. The research is designed to let interviewees to name top 3, because none of them would actually pick equity crowdfunding as their first option, since some business owners strongly believe their business type (B2B) would not be interested for crowd to invest via crowdfunding platforms.

Alternative funding options entrepreneurs list prior to equity crowdfunding:

- Donation-based crowdfunding is the most popular, since there is no debt and equity involved. Reward-based crowdfunding is the second most popular. Two interviewees actually list

reward-based crowdfunding as their first option in alternative finance. One of these two interviewees did not have any government subsidies or loans, but funded completely by themselves, chose reward-based crowdfunding as their 2nd strategic finance.

- Peer-to-Peer business lending and consumer lending are mentioned before equity crowdfunding, which means entrepreneurs really avoid exchange equity at their seed stage or early stage.

- Reward-based crowdfunding is chosen by interviewees B2C business type. They list reward-based crowdfunding as the best option in alternative financing. However, for B2B businesses, reward-based crowdfunding is not chosen. Instead, equity crowdfunding is more favourable than reward crowdfunding among B2B businesses.

Sub question 3: "**What are the concerns or deterrents from entrepreneurs to choose equity crowdfunding**?"

All of the entrepreneurs are the ones who have never participated in an equity crowdfunding campaign. What are the reasons they do not choose equity crowdfunding as an alternative funding?

Since all of the interviewees are from the high tech sector in the Netherlands, there is plenty of "free money", such as government subsidies, innovation funds, and innovative competition prize money. For good quality start-ups in the high tech sector in the Netherlands, there are other better options than equity crowdfunding. In quality start-ups, for example, the ones can be granted government subsidies, innovation funds, and innovative competition awards, they would choose these sources first. If they need extra money, they would pursue traditional investors who can provide knowledge, networking and value-added service for the same amount of equity entrepreneurs are offering. In other words, if start-ups can get government subsidies, innovation funds, and innovative competition prize money, it is possible they will also find traditional investors who are willing to contribute knowledge and network to the start-ups.

Sub question 4: "**What are the recommendations from the entrepreneurs' point of view to improve equity crowdfunding to attract more projects**?"

There are two sources of recommendations to Netherlands platforms. One is input from entrepreneurs from qualitative data collection. The other one is from second hand information collected on the Internet how platforms are operating in the UK, since volume of equity crowdfunding in the UK is 20 times as much as the one in the Netherlands in 2015. If there is no innovation or measurements taken from

the Netherlands platforms, the gap between Netherlands equity crowdfunding and the market leader would be even bigger.

From entrepreneurs' point of view, which is the answer of the sub question 4 from main RQ 1, they have following suggestions in summary.

1. Equity crowdfunding platforms can attract more financial sources than only from the crowd. Since Netherlands government promote innovation and entrepreneurship a lot. There are different types of subsidies provided to entrepreneurs directly, or together with bank loans to support entrepreneurs. In both scenarios if the start-up goes bankrupt, entrepreneurs do not have to pay back at all. In this case, entrepreneurs from the interviews suggest **there is a possibility to attract government subsidies into equity crowdfunding**. Platforms can have more funding. Government can also have access to invest to innovative projects that platforms can also help to do due diligence. So government can have a new source of evaluation from platforms. Two possible applications are like this. 1) If the entrepreneur has reached the target of equity crowdfunding campaign, the government subsidy would be provided on top of the money raised on equity crowdfunding. So it doubled the investment originally it would acquire only from the crowd.2) If the entrepreneur has reached the goal of equity crowdfunding, a bank loan under government incentives would be provided on top of this equity crowdfunding funding. In other words, entrepreneurs can exchange less equity for the same amount of money.

However, on equity crowdfunding platforms, the innovative projects are limited. Future study can explore the feasibility of this suggestion. In the UK, the collaboration between VC and equity crowdfunding already exists. Venture capital start investing in start-ups via equity crowdfunding platforms. This has proved to be feasible in the UK. It can be possible in the Netherlands in the future as well, since from the regulation part, equity crowdfunding in the UK and in the Netherlands are similar.

So with more actors (venture capital, angel investors, government subsidies) involved on equity crowdfunding platforms, not only the crowds, there would be a bigger cash pool to invest in campaigns. In return, it can attract more entrepreneurs to participate in equity crowdfunding platforms.

2. Equity crowdfunding platforms should embrace some functions on the websites. For example, entrepreneurs would like to know who are investing in their business, especially they would like to know if there is some one with **network and knowledge** to contribute on top of their monetary investment. This is the main reason why entrepreneurs do not prefer equity crowdfunding. Because high tech start-ups in the Netherlands, with various generous subsidies provided by the government, as well as the prize money provided by winning an innovation award, most high tech start-ups aim to get large VC or angel investment

afterwards. With the external network and management experiences from VC or angel investors, start-ups can scale up very fast. However, with equity crowdfunding, the volume campaign is in general smaller than VC or angel investment. There is no network and knowledge to provide to entrepreneurs neither.

So how to invite investors to contribute their network or knowledge from the equity crowdfunding platforms, it is a problem for platforms to solve. One solution can be from the previous point. With more actors involved on equity crowdfunding platforms, it is not only sharing risks from crowds, but also it can attract more entrepreneurs, since VC and angels are the ones with network and knowledge.

3. From second hand information collection for the UK platforms, it is suggested there are some trends for Netherlands platforms to follow. From Chapter 3.2.3, various trends were listed. **Lead investor** or a syndicate mechanism for equity crowdfunding, is a trend now going on in the UK. The lead investor serves as an experienced investor who can conduct due diligence on behalf of rest of investors from the crowd, but also lead investor attracts followers to invest because of his/her reputation in the field. Under this system, the success rate of campaigns goes up to more than 72%, while platforms without lead investor mechanism is about 55%, according to the latest figure as of March 2016 (CrowdRating, 2016).

Another trend from UK is the **unified nominee structure**, which is the "funds" function by Seedrs. So investors can invest to equity crowdfunding campaigns, convertible loans, or funds. In the earlier two options, investors invest under their own identity to projects, which means entrepreneurs can have hundreds of small investors that they have to manage updates with. However, in the "funds" option, investors put money into a pool under the name of Seedrs. And Seedrs invest to different projects to leverage the risks for investors, acting as a portfolio manager in traditional banking. Also, entrepreneurs do not have to worry about managing hundreds of investors. All investment is under the unified nominee structure, which is under Seedrs name. This structure provides both sides convenience. This innovative trend is definitely worth borrowing by Netherlands platforms.

Also, there is a difference of **operations on due diligence** between the UK platforms and the Netherlands platforms. The Netherlands platform Symbid perform due diligence after the campaign target is reached and before passing to the entrepreneur. While the UK platforms perform due diligence before listing a campaign online. This measurement results a rejection rate of 72% of projects. However, investors can expect better quality projects to invest. As a result, platforms act with more reputation would attract more investors.

Three points above are recommendations to platforms, which answered the main RQ 1.

For the Main RQ2: **Considering equity crowdfunding as an alternative finance for entrepreneurs, what would an assessment tool look like for entrepreneurs in high-tech start-ups in the Netherlands to assess them whether equity crowdfunding can be considered in seed-stage financing?**

Similarly, sub questions would be answered first. Sub quesiton1: "**What are the success factors for equity crowdfunding campaigns**?"

A list of success factors are summarised in Chapter 4.2.2. There are in total 11 success factors in Table 8 Summary of success factors of equity crowdfunding. (Source : Author), in which *social capital, intellectual capital* and *uncertainty* were discussed. Eventually "social capital", and "uncertainty" were not selected into the assessment tool. "Intellectual capital" is selected into the assessment tool. Also, due to the context of the Netherlands start-up financing, "*incubator*" as a success factor is added into the assessment tool.

Sub question 2: "**What do entrepreneurs think about this assessment tool?"**

Most of the entrepreneurs in this research think this tool "easy to understand". But some questions are frequently asked about "percentage of equity willing to offer", "why do you choose scale of 1,3 and 5", and "meaning of total number".

Since it depends on the valuation of the company and how much money they are raising. So it is a tricky question, hard to answer from entrepreneurs' point of view. Eventually for the assessment tool final version, "percentage of equity willing to offer" is removed.

Also when it comes to the question "what factor do you think is missing in this tool", most entrepreneurs mentioned about "B2B and B2C". They think for equity crowdfunding, whether it can attract interest of the crowd is the key, which means whether the crowd can understand the business model easily, so they can evaluate this investment opportunity better. Academic research can confirm this thought from entrepreneurs. Indeed according to Lukkarinen *et al*. (2016), understandability of a company's concept or offering plays a role in the funding success. "Equity crowdfunding campaigns of companies providing more understandable offerings are more successful." (Lukkarinen *et al*. 2016).

So in the end, "**percentage of equity**" is replaced by "**B2B or B2C business type**". Please see Appendix D for final version of assessment tool.

6.2 Discussions and Limitations

6.2.1 Ability to Generalize

The sample size of this qualitative research is 7. 6 of them are from or formally from Yes!Delft incubator. Yes!Delft is one of the biggest technical incubator in Europe. There are more than 180 start-ups in Yes!Delft, in which most of them are B2B business type. This research can understand technical start-ups why they have not consider equity crowdfunding as an alternative funding.

The insights entrepreneur interviewees provide into this research can generalise to *other technical star-ups in other European countries*, as long as there are abundant government subsidies to promote innovation, such as Sweden, Switzerland, the UK, Denmark.

The assessment tool can be utilised by entrepreneurs in both technology sector and non-technology sector, since the literature originally testing success factors, did not differentiate technological and non-technological start-ups. So this tool is possible to generalise to *non-tech start-ups*. This tool can be used in the Netherlands as a pre-screening purpose, or the purpose of raising awareness of equity crowdfunding by incubator/accelerator or by entrepreneurs themselves.

This assessment tool can also be generalised to technical incubators in Europe, since they are under the same scheme in European as Yes!Delft on promoting innovation. Technical incubators may face the same situation as Yes!Delft that there are abundant government subsidies for technical start-ups, they may neglect to educate entrepreneurs about this choice, and ignore the benefit of equity crowdfunding as an alternative finance can provide, such as free marketing tool for their business, and easy money to get comparing to

Also, regarding to the other contribution of this thesis, the recommendation to equity crowdfunding platforms can be generalised to all equity crowdfunding industry in Europe.

6.2.2 Limitation of the assessment tool

Since this assessment tool gathers all the success factors from different literature, the samples from the campaigns are different. It can be from different platforms, from different countries, during different period of time. So by simply assemble those success factors together may not necessarily reflect the reality. Since all of the factors did not exist in the same campaign, some success factor may have bigger weight than the other factors. However, it is not possible to test in this research. In other words, the score of this

assessment tool is instructive and intuitive. The higher score means a higher chance to win an equity crowdfunding campaign, but a lower score in certain question only means a weakness that can be perceived by the crowd as a negative signal, which would lead to failure of the fundraising. However, since the crowd investors perceive all the factors as a package to evaluate a campaign, some negative signals can be possible to be compensated by other means to enhance the chance of winning. For example, if the entrepreneur from this campaign does not have an MBA degree but instead a PhD degree, or he can be very experienced in related field or with executive board members with strong network or knowledge to support this company. Even this entrepreneur does not have MBA degree but he may also be possible to raise money successfully.

This research assembles all the available success factors into an assessment tool for entrepreneurs to evaluate themselves whether equity crowdfunding is suitable for them, whether there is a good chance they can raise money successfully through equity crowdfunding platform, in order to raise more awareness and reduce concerns of equity crowdfunding among entrepreneurs in the Netherlands. However, the success factors are found individually in the literature, which means from different samples from data on different equity crowdfunding campaigns in different countries and in different time frames. This assessment tool serves a purpose to give entrepreneurs a fast/quick insight about what qualifications or factors a successful campaign needs and pinpoint the weakness that entrepreneurs can better prepare for in the future equity crowdfunding fundraising.

6.3 Reflection

6.3.1 Choices of Theory

“Lemon market” theory (Akerlof 1970)

The reason to choose “Lemon Market” Theory is because the underlying concern that the equity crowdfunding industry would not be flourishing or information asymmetry would even lead to market failure depending on how big the information asymmetry is between investors and fundraisers. Based on the development of the Netherlands, and comparison in the European context, where the UK is the market leader, the concern of equity crowdfunding market in the Netherlands would slow down the growth seems logical. Most of the mainstream academic literature available at this moment, especially the non-academic information on Internet, almost only emphasizing on promoting or glorifying the brilliant innovative idea of equity crowdfunding to attract non-professional investors from public. However, after the literature review for seed-stage financing, it is clear that even for professional investors, VC and angels, their average period

of return on their investment is around 7 years. Since the first equity crowdfunding websites emerged in 2011, such as Symbid from the Netherlands, the majority of equity crowdfunding investors may still wait for their exit if their invested start-ups manage to survive in the market. The beauty of having crowd involved in an investment activity is, if the investment is with good return, by word-of-mouth everyone will know it, because of the development of Internet. Also the danger of having general public involved in investment activities, is that if the earliest equity crowdfunding investors, are still patiently waiting for their exit, assuming they have invested in the start-ups are still exist in the market, but due to different reasons this group of earliest equity crowdfunding investors eventually do not get good return or cannot cash out based on the whole mechanism of equity crowdfunding is benefiting entrepreneurs and platforms. It would be crucial for equity crowdfunding industry whether it can still be able to raise money from crowd a few years later.

So based on the uncertainty of outlook in equity crowdfunding industry, "lemon market" theory in this research serves a ground theory and based on this ground theory, this research is to improve whole equity crowdfunding industry in the Netherlands to attract more entrepreneurs.

Signaling Theory (Spence, 1973)

It is also possible to choose a different theory, Signaling theory from Spence (1973). In job hiring process, education credentials such as a degree or certification, send a positive signal to human resource department that this person is a qualified candidate. In the context of equity crowdfunding, those success factors are positive signals to send to investors that they are quality projects to invest.

However, comparing to "lemon market" theory, signalling theory is already embedded in introducing success factors. While, "lemon market" theory brings more focus on how to reduce information asymmetry to promote a healthy market place for equity crowdfunding. So eventually "lemon market" theory was chosen in this thesis to be introduced as a background in problem description.

6.3.2 Choices of RQ

At the beginning of this Master's thesis, when it was possible to explore different interesting topics about equity crowdfunding, at the beginning it would be interesting to investigate from investors' perspectives, how equity crowdfunding can attract more investment from the crowd, how can equity crowdfunding reduce risks for investors, while immediately after the fundraising campaign, both entrepreneurs and platforms get funding and commission right away, but investors have to wait for years to cash out their investment. At the same time, investors cannot able to directly influence the business

decisions of the start-up. Most often crowdfunding investors get updates through intermediates, as known as platforms.

The research can be done either by quantitative or qualitative method to collect opinions of investors how to improve equity crowdfunding industry in the Netherlands. But eventually this direction of research question was not chosen, due to following challenge. A) If quantitative method is chosen, it would be hard to choose investors from the platform, because their background varies too much. There can be investors who are professional angels, or more possibly there are investors do not know too much about equity crowdfunding. So it would be hard to have a sample to represent the Netherlands investors on equity crowdfunding platforms. Also, if quantitative method is chosen to collect data from Netherlands equity crowdfunding investors, it is possible there are not enough respondents to have convincing statistical results, because of following reasons:

- Rich individuals may not be willing to expose their personal information such as investment history.

- More importantly, it is not possible to get collaboration with Symbid for this research. They are not very interested in a Master's thesis research. Since Symbid is the only pure equity crowdfunding platform in the Netherlands that it can represent equity crowdfunding in the Netherlands. There are different consultancy industry reports to ask collaboration and data from Symbid on a national or European level.

- There was a similar investor profile survey done already by research of Cholakova & Clarysse (2015). The survey was sent out to investors via Symbid newsletter, in which 155 investors completed the full survey with a responding rate of 34.14%. The intended survey would cover similar questions, with one or two options to test the correlation. It was highly uncertain whether it would be interesting to investors to do a similar survey again one year later.

However, in the end, the research questions were chosen from entrepreneurs' perspective, because with the privilege to study in TU Delft, the incubator nearby Yes!Delft with more than 180 technical start-ups. It is more approachable to conduct a research from the entrepreneurs' point of view. It would be future study to investigate Netherlands crowdfunding investors' opinions how to reduce information asymmetry. Combining with this research from entrepreneurs' angel, and future research from investors' angel, it would be possible to reach a realistic and feasible conclusion how to reduce information asymmetry and how to make Netherlands equity crowdfunding prospering.

6.3.3 Findings

Literature reveals one of the concerns why entrepreneurs prefer not to choose equity crowdfunding is that they are afraid of their business ideas being stolen (Valanciene & Jegeleviciute 2013)(Manchanda & Muralidharan 2014). This concern is not mentioned in the result of this research. None of the interview participants mentioned that they are afraid that their business ideas might be stolen by participating equity crowdfunding. This is interesting. In my opinion, the main reasons is that all interviewees from this research are technical start-ups. Most of them have already acquired patents to protect their intellectual property. It varies from other types of start-ups, such as a business like airbnb website. If a company's success based on an innovative idea or business model that does not require some advanced technology to support this business, it would be easier to be duplicated if they publishing this idea online to raise money at a very early stage. If a company has already had multiple patents in hand, they would not be afraid to show to the world how brilliant their technologies are and it is a great opportunity for crowds to invest.

6.4 Future Study

6.4.1 Related to Recommendation to Attract More Entrepreneurs into Equity Crowdfunding

This Master's thesis describes opinions from the entrepreneurs' point of view. Basically one of the reasons they do not want to choose equity crowdfunding is because it is only money attached. Comparing to traditional investors, or formal investors, as venture capitalists or angel investors, there is no contribution of network and knowledge from equity crowdfunding investors. Most entrepreneurs from this sample (5 out of 7) indicated, if there were the equity crowdfunding platforms to provide the possibility for entrepreneurs to choose investors, and invite certain investors to be on board, it would be more attractive for entrepreneurs to choose equity crowdfunding in their seed-stage financing. However, it is only one side of the good wish how to improve equity crowdfunding in a three-party investing world, entrepreneurs, platforms, and investors. There might be conflicting interest from platform and investors' side, whether the suggestion of entrepreneurs is applicable in real life. So **future study would involve collecting opinions from investors whether they are willing to or are able to contribute network and knowledge to the start-ups they invested in via equity crowdfunding platform**. Then if both sides think it is a good idea, the platform has no reason to not to implement it unless it is technologically not possible or it is against certain regulation from government, or it would be hard to implement due to difficulty of defining non-cash added contribution between different investors from the crowd.

On one hand, entrepreneurs would like to get as much as possible, not only investment in exchange for their equity, but also they expect to have non-cash value-added service on top of the investment. Also, if entrepreneurs choose equity crowdfunding, they prefer to get network and knowledge from the crowd as well. However, on the other hand, a crowd contributes small money into a big cash pool to invest in a start-up, but investors do not influences or rights to participate in daily operation of the start-ups they invested in. **For equity crowdfunding platforms, how to balance the expectation between entrepreneurs and investors, needs to be further studied.**

Since to be able to collect opinions from both sides, entrepreneurs and investors, and find a solution to take into account of their expectations and interests, would be the job of platform to do, to innovate their business models, to provide more convenience or services to entrepreneurs and investors, instead of only playing a role as an intermediate to post a campaign online as a information sharing broker. For example, from the first equity crowdfunding platform emerged in the world since 2011, in the past 6 years there are noticeable evolution from platform side to provide better service to entrepreneurs and investors. For example, the new business model of *lead investor* mechanism used in the platform SyndicateRoom from the UK, or the *funds* option for Seedrs platform to collect investors money into a pool and invest to start-ups under the name of Seedrs to better manage the investor relations with entrepreneurs and better leverage risks of investors to provide a "portfolio management" to the crowd investors whose minimum requirement of investment is £/€100 (Seedrs, 2017). With the **future research on investors how equity crowdfunding should evolve**, together with the result of this thesis research what entrepreneurs think how equity crowdfunding should evolve, it would be possible to provide realistic and feasible suggestions or recommendations to platforms, if interest from both parties align together.

6.4.2 Related to Assessment Tool

Currently the assessment tool assembles all success factors from different literature together, due to the lack of quantitative research about equity crowdfunding. If possible in the future, if all success factors in the assessment tool can be possible to test correlation of each success factor in the same sample. That would be more convincing, because currently 11 success factors from 5 literatures (Table 7 Summary of Key Literature. (Source: Author), which means those factors were tested whether there is a correlation with success in 5 different samples from different time frame. If in the future, all 11 success-factors or even more success factors to be found later can be tested in one sample within the same timeframe. It would be more convincing to understand different factors role. In this case, the conflicted theories whether factor 1 *"Lower percentage of equity offerings*" from table 7 is success factor or not can be tested in the future study.

Also, if those factors can be tested in the same sample in the future, the weight of certain factor can be also possible to test. In other words, different factors may influence success of an equity crowdfunding campaign in different levels. So the proposed future study can test how those success factors interact when they are collected together in the same sample, whether those factors are still correlated with success of an equity crowdfunding campaign.

Also, for the part of assessment tool, with the current literature of success factors of an equity crowdfunding campaign, it gives an overview on the probability/readiness the entrepreneur has for an equity crowdfunding campaign. However, there must be more factors that can influence entrepreneurs to choose equity crowdfunding, and more factors to influence success of a campaign. One B2B start-up founder does not think he will ever be interested in equity crowdfunding, because: 1) he does not think crowd would be interested in his b2b product, since it is a product to provide to factories to recycle the wasted heat from chimney. 2) He is not a person who is good with social media so he hesitates to choose equity crowdfunding to communicate everything online. Only if the platform can help him promote his campaign and communicate with investors on a daily basis, otherwise he is not willing to choose equity crowdfunding, since for this industrial B2B product related to energy, he can apply government subsidies from European level, Netherlands government national level or Netherlands government regional level. So in this case, **future studies can be conducted from the perspective of entrepreneurs' personalities, whether there is a correlation between personality of entrepreneurs and the funding choices that they choose.** For entrepreneurs who are good with social media and inclined to promote their business ideas or products online are more likely to build a community, which may turn into the crowd investors in the future.

Bibliography

Agrawal, A., Catalini, C., & Goldfarb, A. (2016). Are syndicates the killer app of equity crowdfunding? *California management review , 58* (2), 111-124.

Agrawal, A., Catalini, C., & Goldfarb, A. (2014). Some simple economics of crowdfunding. *Innovation Policy and the Economy , 14* (1), 63-69.

Ahlers, G. K., Cumming, D., Günther, C., & Schweizer, D. (2015). Signaling in Equity Crowdfunding. *Entrepreneurship Theory and Practice , 39* (4), 955-980.

Akerlof, G. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics , 84* (3), 488-450.

Balakrishnan, S., & Koza, M. P. (1993). Information asymmetry, adverse selection and joint-ventures: Theory and evidence. *Journal of economic behavior & organization , 20* (1), 99-117.

Bandura, A., & Walters, R. H. (1977). *Social learning theory.*

Beaulieu, T., Sarker, S., & Sarker, S. (2015). A conceptual frame work for understanding crowdfunding. *Communications of the Association for Information Systems , 37* (1), 1-31.

Belleflamme, P., Lambert, T., & Schwienbacher, A. (2010, June). Crowdfunding: An industrial organization perspective. *Prepared for the workshop Digital Business Models: Understanding Strategies* , 25-26. Paris.

Bikhchandani, S., Hirshleifer, D., & Welch, I. (1992). A theory of fads, fashion, custom, and cultural change as informational cascades., 100(5), 992-1026. *Journal of political Economy , 100* (5), 992-1026.

Cambridge Centre for Alternative Finance. (2016). *Sustaining Momentum- the 2nd European Alternative Finance Industry Report.*

Catalini, C., Fazio , C., & Murray, F. (2016). Can Equity Crowdfunding Democratize Access to Capital and Investment Opportunities?

CB Insights. (2013, 11 7). *It's Definitely a Marathon – Venture-Backed Tech IPOs Take Seven Years from First Financing*. From CB Insights: https://www.cbinsights.com/blog/venture-capital-exit-timeframe-tech/?utm_content=bufferb6361&utm_source=buffer&utm_medium=twitter&utm_campaign=Buffer

Chenail, R. J. (1997). Keeping things plumb in qualitative research. *The Qualitative Report , 3* (3), 1-8.

Cholakova, M., & Clarysse, B. (2015). Does the possibility to make equity investments in crowdfunding projects crowd out reward-based investments? *Entrepreneurship Theory and Practice , 39* (1), 145-172.

Climate-KIC Scout Report . (2017). *Start-up funding.* Retrieved 06 26, 2017 from startupinsignts: http://www.startupinsights.org/wp-content/uploads/2014/06/Scout-Report-Startup-Funding.pdf

Cohen, D., & Crabtree, B. (2006, June). *Qualitative research guidelines project.* From http://www.qualres.org/HomeSemi-3629.html

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. 37(1), 39-67. *Journal of Management , 37* (1), 39-67.

CrowdRating. (2016, May). *Our Facts & Figures*. From CrowdRating: https://www.crowdrating.co.uk/our-facts-figures/

Davidson, R., & Poor, N. (2014). The barriers facing artists' use of crowdfunding platforms: Personality, emotional labor, and going to the well one too many times. *New media & society* , 1461444814558916.

De Buysere, K., Gajda, O., Kleverlaan, R., Marom, D., & Klaes, M. (2012). *A Framework for European Crowdfunding.* From European Crowdfunding Network: http://eurocrowd.org/wp-content/blogs.dir/sites/85/2013/06/FRAMEWORK_EU_CROWDFUNDING.pdf

Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research.* Sage publications, inc.

Devenow, A., & Welch, I. (1996). Rational herding in financial economics. *European Economic Review , 40* (3), 603-615.

Drever, E. (1995). *Using Semi-Structured Interviews in Small-Scale Research. A Teacher's Guide.*

Freedman, D. M., & Nutting, M. R. (2015). A brief history of crowdfunding. . *Including Rewards, Donation, Debt, and Equity Platforms in the USA.*

Gage, D. (2012). The venture capital secret: 3 out of 4 start-ups fail. *Wall Street Journal* , 20.

Gajda, O., & Mason, N. (2013). *Crowdfunding for Impact in Europe and the USA.* European Crowdfundign Network.

Gerber, E. M., & Hui, J. (2013). Crowdfunding: Motivations and deterrents for participation. *ACM Transactions on Computer-Human Interaction (TOCHI) , 20* (6), 34.

Glaser, B. G., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research.* New York: Aldine.

Grell, K. B. (2015). *Rewards, Equity, and a Crowd in Between*. From Crowdfundinsider: https://www.crowdfundinsider.com/2015/01/60767-rewards-equity-and-a-crowd-in-between/

Griffin, Z. (2012). Crowdfunding: Fleecing the American masses. *Working paper* .

Harrison, R. (2013). Crowdfunding and the revitalisation of the early stage risk capital market: catalyst or chimera? *Venture Capital , 15* (4), 283-287.

Hellmann, T., & Puri, M. (2002). Venture capital and the professionalization of start-up firms: Empirical evidence. *The journal of finance , 57* (1), 169-197.

Hemer, J. (2011). *A snapchot of corwdfunding (No. R2/2011).* Working papers firms and region.

Hsu, D. H. (2004). What do entrepreneurs pay for venture capital affiliation? *The Journal of Finance , 59* (4), 1805-1844.

Ibrahim, D. M. (2015). Equity Crowdfunding: A Market for Lemons? *Minnesota Law Review* , 100.

Indiegogo. (2016). *Indiegogo*. Retrieved 4 28, 2016 from Indiegogo: https://www.indiegogo.com/

Innovation Quarter. (2015, 11 11). *YES!DELFT RANKED 4TH IN EUROPEAN TOP 10 OF UBI INDEX FOR TOP INCUBATORS.* Retrieved 3 19, 2017 from http://www.innovationquarter.nl/nieuws/yesdelft-ranked-4th-european-top-10-ubi-index-top-incubators

Iyengar, R., Van den Bulte, C., & Valente, T. W. (2011). Opinion leadership and social contagion in new product diffusion. *Marketing Science , 30* (2), 195-212.

Janssen, T. (2013). The Seven Stages of Business Life Cycle,. *White paper published by Just in Time Management Group* .

Kantor, R. (2014). Why Venture capital will not be crowded out by crowdfunding. *UK L. Student Rev. , 2*, 5.

Kantor, R. (2014). Why Venture capital will not be crowded out by crowdfunding. *UK L. Student Rev. , 2* (5).

Kickstarter. (2017, 6 22). *Kickstarter*. Retrieved 6 22, 2017 from Stats of Kickstarter: https://www.kickstarter.com/help/stats

Kirby, E., & Worner, S. (2014). Crowd-funding: An infant industry growing fast. . *IOSCO* .

Kleemann, F., Voß, G. G., & Rieder, K. (2008). Un(der)paid Innovators: The Commercial Utiliza-tion of Consumer Work through Crowdsourcing. *Science, technology & innovation studies , 4* (1), 5-26.

Lambert, T., & Schwienbacher, A. (2010). An empirical analysis of crowdfunding. *Social Science Research Network* , 1578175.

Leapfunder. (2017). *Campaign page of Bolt Mobility B.V. 1st production line*. From Leapfunder: https://www.leapfunder.com/-b

Lu, H., Tan, Y., & Huang, H. (2013). Why do venture capital firms exist: An institution-based rent-seeking perspective and Chinese evidence. *Asia Pacific Journal of Management , 30* (3), 921-936.

Lukkarinen, A., Teich, J. E., Wallenius, H., & Wallenius, J. (2016). Success drivers of online equity crowdfunding campaigns. *Decision Support Systems* (87), 26-38.

Manchanda, K., & Muralidharan, P. (2014). Manchanda, K., & Muralidharan, P. (2014, January). Crowdfunding: a new paradigm in start-up financing. In Global Conference on Business and Finance Proceedings (Vol. 9, No. 1, pp. 369-374). *In Global Conference on Business and Finance Proceedings , 9* (1), 369-374.

Massolution. (2013). *2013CF Crowdfunding Industry Report.* From Massolution: http://www.compromisoempresarial.com/wp-content/uploads/137356857-Massolution-2013CF-Excerpt-Revised-04182.pdf

Massolution. (2012, May). *Crowdfunding Industry Report.* From http://www.crowdfunding.nl/wp-content/uploads/2012/05/92834651-Massolution-abridged-Crowd-Funding-Industry-Report1.pdf

Massolution. (2015). *Global crowdfunding market to reach 34.4b in 2015*. Retrieved 4 28, 2016 from Crowdsourcing.org: http://www.crowdsourcing.org/editorial/global-crowdfunding-market-to-reach-344b-in-2015-predicts-massolutions-2015cf-industry-report/45376

Mollick, E. (2013). The dynamics of crowdfunding: An explorartory study. *Journal of business Venturing , 29* (2014), 1-16.

Netherlands Crowdfunding Association. (2017). *Netherlands Crowdfunding Association*. Retrieved 2 13, 2017 from de branchevereniging: http://startcrowdfunding.nl/de-branchevereniging/

Ordanini, A. (2009). Crowdfunding: customers as investors. *The Wall Street Journal , 23* (3).

Ordanini, A., Miceli, L., Pizzetti, M., & Parasuraman, A. (2011). Crowd-funding: transforming customers into investors through innovative service platforms. *journal of service management , 22* (4), 443-470.

Pierrakis, Y., & Collins, L. (2013). Crowdfunding: A new innovative model of providing funding to projects and businesses.

Racefields. (2016, 7 18). *Seedrs Expands Into The Netherlands*. From Racefields: http://racefields.com/seedrs-expands-into-the-netherlands/

Ralcheva, A., & Roosenboom, P. (2016, 11 1). On the Road to Success in Equity Crowdfunding. *Available at SSRN: https://ssrn.com/abstract=2727742 or http://dx.doi.org/10.2139/ssrn.2727742* .

Schwienbacher, A. (2014). Crowdinvesting in the Netherlands: Market analysis, securities regulation and policy options. *DSF Policy Paper* (48), 1-20.

Schwienbacher, A., & Larralde, B. (2010). *Crowdfunding of Small Entrepreneurial Ventures*. Oxford University Press.

Seedrs. (2017). *How to invest*. From Seedrs: https://www.seedrs.com/how_to_invest

Seedrs. (2017). *Types of equity*. From Seedrs: https://www.seedrs.com/learn/guides/types-of-equity

Seidel, J. V. (1998). *Qualitative Data Analysis(originally published as Qualitative Data Analysis, in The Ethnograph v5.0: A Users Guide, Appendix E, 1998, Colorado Springs, Colorado: Qualis Research)*. Retrieved 5 25, 2017 from www.qualisresearch.com

Sekaran, U., & Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach* (5th ed.). New York: John Wiley & Sons, Inc.

Shane, S., & Cable, D. (2002). Network ties, reputation, and the financing of new ventures. *Management Science , 48* (3), 364-381.

Signori, A., & Vismara, S. (2016). Returns on Investments in Equity Crowdfunding.

Sorenson, O., & Stuart, T. E. (2001). Syndication networks and the spatial distribution of venture capital investments1. *American journal of sociology , 106* (6), 1546-1588.

Spence, M. (1973). Job market signaling. *The quarterly journal of Economics* , 355-374.

Spence, M. (1973). Job market signaling. , 87(3), 355-374. *The quarterly journal of Economics , 87* (3), 355-374.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research* (Vol. 15). Newbury Park, CA: Sage.

SyndicateRoom. (2017, May 8). *Success Stories*. From SyndicateRoom: https://www.syndicateroom.com/about-us/success-stories

Timmons, J. A., & Bygrave, W. D. (1986). Venture capital's role in financing innovation for economic growth. . *Journal of Business venturing , 1* (2), 161-176.

Valanciene, L., & Jegeleviciute, S. (2013). Valuation of crowdfunding: benefits and drawbacks. *Economics and Management , 18* (1), 39-48.

van Gool, L. (2016). *Dutch startups raise €263 million in 2016 – a mighty year for medtech*. From StartupJuncture: https://startupjuncture.com/2016/12/30/dutch-startups-raise-252-million-in-2016/

van Gool, L. (2015). *Dutch startups raise €430 million in 2015*. From StartupJuncture: https://startupjuncture.com/2015/12/29/dutch-startups-raise-e430-million-in-2015/

van Otterloo, S. (2014). *Dutch startups raise €500 million in 2014*. From StartupJuncture: https://startupjuncture.com/2014/12/25/dutch-funding-2014-overview/

Vismara, S. (2016). Equity retention and social network theory in equity crowdfunding. *Available at SSRN 2654325* .

Vulkan, N., Astebro, T., & Fernandez Sierra, M. (2016). Equity crowdfunding: A new phenomena. *Journal of Business Venturing Insights , 5*, 37-49.

Wilson, K. E., & Testoni, M. (2014). Improving the role of equity crowdfunding in Europe's capital markets.

Wiltbank, R. (2005). At the Individual Level: Outlining Angel Investing in the United States. *Working Paper* .

Wright, M., & Robbie, K. (1998). Venture capital and private equity: A review and synthesis. *Journal of Business, Finance, and Accounting , 25* (5), 521-570.

Yin, R. K. (2013). *Case study research: Design and methods.* Sage publications.

Yin, R. K. (2015). *Qualitative research from start to finish.* Guilford Publications.

Zider, B. (1998). How venture capital works. *Harvard business review , 76* (6), 131-139.

Appendix A: Traditional Funding Sources

Traditionally, the primary sources of funding for start-ups come from personal saving, friends& family, bank loans, and so on. The essential funding sources can also be from venture capital and angel investors. Since in the category of alternative funding sources according to the 2nd European Alternative Finance Industry Report (Cambridge Centre for Alternative Finance, 2016), venture capital and angel investment are not listed in the category. In this thesis, *venture capital* and *angel investors* would be listed in traditional funding sources category. In the Netherlands, which can be different from other countries, that government subsidies and innovation competition prize became also an important source of financing. So in this research, the final list of traditional funding sources would be:

- Personal saving
- Friends & family
- Bank loans
- Venture capital
- Angel investors
- Government subsidies
- Innovative competition prizes/awards

Appendix B: Alternative Funding Sources

According to an overview of European Alternative Finance by Cambridge University, Alternative financing can be categorized as follows: (Cambridge Centre for Alternative Finance, 2016)

- Peer-to-Peer Consumer lending
- Peer-to-Peer business lending
- Equity based crowdfunding
- Reward based crowdfunding
- Invoice trading
- Real estate crowdfunding
- Donation based crowdfunding
- Debt-based securities
- Balance sheet business lending
- Profit sharing crowdfunding

Appendix C: Assessment Tool - Draft

Factor	Key Question	Score	Scale
Equity	Will you consider giving some equity away in order to exchange funding at some point?	5 3 1	Yes, it is possible. Not sure, it depends. Would never consider exchanging equity to get funding.
	Do you want to offer a large percentage of equity or smaller percentage?	5 3 1	From 1- 10%. From 11 – 15. 16% or above.
Future outlook	Do you have a prototype or pilot project?	5 3 1	Yes, I have a prototype and pilot project. Yes, I have a prototype but pilot project is under development. No, I do not have a prototype, neither a pilot project.
	Have you made your first sale?	5 3 1	Yes, I have finished the first sale. The first sale is in the pipeline. No, I do not know when I will have my first sale.
Human capital	Do any of the executive board members have MBAs?	5 3 1	Yes, I have some executive board members with MBA degree. No, but I have some executive board members with Master degree or above. No, I do not have any board members.
	Do you have multiple executive board members?	5 3 1	Yes, we have multiple executive board members. No, but I am looking for some people to join our executive board. No, and I do not plan to look for any new executive board members.
Intellectual capital	Have you received any relevant grant (awards) or patent for intellectual property?	5 3 1	Yes, I have received grant (awards) and patent for IP. Patent, grant or awards are in the process. No, I have not received any.
	Are you currently in an incubator or accelerator?	5 3 1	Yes, I am. Not yet, but I am in the process of being selected in incubator or accelerator. No, I am not in an incubator or accelerator.
Large Investment	Do you know any VC or angel investors who would back your projects if you start an equity crowdfunding campaign?	5 3 1	Yes, I know some professional investors (VC, angel) who are definitely going to invest in my project. Yes, I know some professional investors (VC, angel) who are *interested in* investing in my project. No, I do not know any.
	Do you expect large investments to be made if you run an equity crowdfunding campaign? (Up to 30% of your target)	5 3 1	Yes, I know some professional investors (VC, angel) who are definitely going to invest in my project. Yes, I know some friends and family who are definitely going to invest in my project. No, I do not know any.
Investor's profile	If you already know someone who would invest if you ran a crowdfunding campaign, do they have a public profile?	5 3 1	Yes, I know some professional investors who are definitely going to invest in my project, have a shared public profile on the platform. Yes, I know some friends and family who are going to invest in my project, having a shared public profile. No, investors that I know are not going to have a shared public profile.
Investment in Early days	Do you have financial resources from friends and family to support first five days of campaign?	5 3 1	Yes I do. I am not sure. No, I do not have any.

Appendix D: Assessment Tool - Final Version

Before Taking This Assessment Tool:

This assessment tool is meant for entrepreneurs who are in the stage of seeking seed-stage financing and curious about whether equity crowdfunding is suitable for them, and how much chance they can win an equity crowdfunding campaign based on their current situation. This assessment tool takes about 3-5 minutes to finish and it can help entrepreneurs make efficient financial decisions on whether to raise money via equity crowdfunding or not. Also, it can help entrepreneurs to be better prepared for an equity crowdfunding campaign if they opt for it at some point later.

Please select the most suitable option depending on your current situation. The final score of this assessment tool is intuitive. The higher score means a higher chance to win an equity crowdfunding campaign, but a lower score in certain question only means a weakness that can be perceived by the crowd as a negative signal. The higher score indicate a favourable position regarding the success of a campaign. The final score is intuitive to indicate the readiness to participate an equity crowdfunding campaign.

If for the first question, you choose the option that *you do not consider exchanging equity for funding*, then there is no need to continue the rest of questions.

Explanation of Certain Terms

Prototype: a demonstration of your service/product to show to potential customers. It should be almost the same as the real future service/product, in the similar scale, texture, material, functions, etc.

Pilot project: a project to pre-test your service/product to potential customers (no friends and family), with or without revenue collected

First sale: a project with a formal customer that you collect revenue from.

IP: *intellectual property*

VC: *venture capital*

Incubator: *is a company that helps start-ups to grow by providing management training and office space typically*

Assessment tool- final version

Factor	Key Question	Score	Scale
Equity	1. Will you consider giving some equity away in order to exchange funding at some point?	5	Yes, it is possible.
		3	Not sure, it depends.
		1	Would never consider exchanging equity for funding.
	2. Are your business type B2B or B2C?	5	B2C.
		3	B2B that can be easily understood by general public.
		1	B2B that is hard to explain to general public.
Future outlook	3. Do you have a prototype or pilot project?	5	Yes, I have a prototype and finished a pilot project.
		3	Yes, I have a prototype but pilot project is under development.
		1	No, I do not have a prototype, neither a pilot project.
	4. Have you received revenue from your product or service?	5	Yes, I have received revenue from my product or service.
		3	Not yet, but I will, because the first sale is in the process.
		1	No, I do not know when I will have revenue from the first sale.
Human capital	5. Do any of the executive board members have MBAs?	5	Yes, I have some executive board members with MBA degree.
		3	No, but I have some executive board members with Master degree or above.
		1	No, I do not have any board members.
	6. Do you have multiple executive board members?	5	Yes, we have multiple executive board members.
		3	No, but I am looking for some people to join our executive board.
		1	No, and I do not plan to look for any new executive board members.
Intellectual capital	7. Have you received any relevant grants (such as government subsidies), competition awards or patents for intellectual property?	5	Yes, I have received grant, awards, or patent for IP.
		3	Not yet, but patent, grant or awards are in the process.
		1	No, I have not participated or applied any grant (awards) or patent.
	8. Are you currently in an incubator or accelerator?	5	Yes, I am.
		3	Not yet, but I am in the process of being selected in incubator or accelerator.
		1	No, I am not in an incubator or accelerator.
Large Investment	9. Do you expect large investments to be made if you run an equity crowdfunding campaign? (up to 30% of your target)	5	Yes, I know some investors who are definitely going to invest in my project up to 30% of my target.
		3	Yes, I know some investors who are possible to invest in my project up to 30% of my target.
		1	No, I do not know any.
Investor's profile	10. Do you know any VC or angel investors who would back your projects if you start an equity crowdfunding campaign?	5	Yes, I know some professional investors (VC, angel) who are willing to invest in my project via equity crowdfunding campaign.
		3	Yes, I know some professional investors (VC, angel) who are willing to invest in my project but I am not sure they are willing to invest via equity crowdfunding campaign.
		1	No, I do not know any.
	11. If you already know someone who would invest if you ran a crowdfunding campaign, do they have a public profile?	5	Yes, I know some investors who are going to invest in my project, would like to set up a shared public profile on the platform.
		3	Yes, I know some investors who are going to invest in my project, but I am not sure they are willing to share their profile.
		1	No, investors that I know are not going to have a shared public profile.
Investment in Early days	12. Do you know any investors that if you are going to run an equity crowdfunding campaign, they are willing to invest through platform immediately after the campaign is launched (i.e. within 5 days)?	5	Yes I do.
		3	Maybe, but I am not sure.
		1	No, I do not have any.

After Taking This Assessment Tool:

All of the factors are scientifically correlated with the success of equity crowdfunding campaigns. Since equity crowdfunding is a fairly new phenomenon in the investment world, limited quantitative researches are available. There may be more factors possibly to influence the success of a campaign, such as a business model, networks, effort of marketing, etc. More factors need to be discovered and tested. So this assessment tool serves a very ***preliminary screening purpose*** to provide some insights about equity crowdfunding to entrepreneurs, aiming to letting more entrepreneurs know they may be suitable for getting seed-stage capital from equity crowdfunding.

If you are having a relatively total high score that most questions you receive scores of 3, or 5, it may mean you have a higher chance to get funded through equity crowdfunding. You are recommended to contact equity crowdfunding platforms for further information or actions.

If you are having relatively low total score that most questions you receive scores of 1 or 3, you are recommended to improve your weakness points to be able to better prepare for an equity crowdfunding campaign. When scores are improved to be higher later, you are recommended to contact equity crowdfunding platforms for further information or actions.

Limitations

Since this assessment tool gathers all the success factors from different literature, it means the samples are different. It can be from different platforms, from different countries, during different period of timeframe. So by simply assemble those success factors together, it cannot necessarily reflect the reality, since different success factor can weight differently among each other. In other words, different success factor may be more important than some other ones. So there is no specific score range that it means certain chance to get funding successfully. This assessment tool can be viewed as ***a readiness indicator*** to participate equity crowdfunding campaign.

	T	S	Y	B	R	JD	JL
Part 1							
1. Company info	B2B	B2B	B2B	B2B	B2B	B2C	B2C
	1.5 years old	1.5 years	5 months old	1 year old	1 year old	1.5 years old	1 year old
		2 founders	2 founders	2 founders	4 founders	participated reward-crowdfunding on July 2016	4 founders
	industrial product in energy	product - office/factory building use	software as a service to company	healthcare product hospital-use	product - industial use	product- domestic use	healthcare product personal-use
Seed stage funding sources and comparison							
2. Traditional funding sources have chosen	Government subsidy, awards, accelerators	polit projects, innovative competition (awards), government subsidies	Corperate investment	Government subsidy, government loan, angel investment.	Government subsidy/loan, angel investment	so far we fund everything ourselves and we are looking at government subsidies	Friends and family; government subsidy; innovation fund from RaboBank; awards money from competition. It is really nice because awards is just money and you get the publicity and there is assessment on your idea.
3. Alternative funding sources have chosen	None	none	None	None	None	reward based crowdfunding	We have business lending. Thinking about reward crowdfunding
4. Why or why not choose alternative funding?	Relatively simple, there is no strings attached. Competitions and accelerators can also put you into contact. For example, customers, but also from manufacturing partners, also with industry experts. So you get money and support. Crowdfunding I don't think, we don't want to, it is quite risky, we are building hardware. It is quite risky. I prefer not to borrow money. Crowdfunding, it is because, I don't believe crowdfunding can be applicable to my situation at the moment. It also depends on the business model, but at the moment i don't think it is applicable. Invoice trading, I think it is too diverse of the core activity you are doing.	We are doing two things basically at the same time, government subsidies and formal investors from companies and venture capital. For us, giving away equity is always our last resort. We would rather not to do them. So we are doing in parallel pursuing different types of funding at the same time. And then once we know where our success chances are with these, then we make a decision.	The part that is missing is we also get money from contracts with companies, which is sales. We try to get very quick turnover immediately. So there might be a chance that in the end we need more funding, we might opt for one of these types of investment.	For all the types of crowdfunding, I don't believe it is the right product to do. What I raise money I also want to have smart capital. I don't want money only, but also someone understands the industry and helps us mostly in networks. We have an angel investor who understands the technology. He is a surgeon. He has great network. He has a distribution company so he can sell. I think eventually everything goes well, the network this angel investor has, will be more valuable than the money he puts in. Let's say if he puts 1 million in total. Later he can raise in sales, in China. That can be tons of millions per year. That's what I mean by smart capital. Crowdfunding for that reason stops for me. Of course we can decide to put this angel investor into an equity crowdfunding campaign, and maybe get some extra money. But reason 1, it is not necessary. If from this angel investor we can get enough money, there is no need for extra money. Reason 2 is I do not like crowdfunding. Maybe I am too arrogant I have to admit in this sense. I believe on the platform there are also bad companies online, and I do not want to be seen among the bad companies. We are a medical technology company. So reputation is everything. So I really care about our reputation. I am not totally against crowdfunding. Me and my business partner have some ideas about consumer based products, just for fun, like some toys. That for sure I will put on the crowdfunding website. But for medical technological company, I do not feel this type of platforms are suitable.	For us equity crowdfunding can be interesting. The others like reward crowdfunding to sell products online, we are not very interesting because we have a B2B product. So finding consumers for gearbox is not simple. We have not done equity crowdfunding so far, is because with equity crowdfunding you mainly get money and not that much expertise and advice, non-cash related contribution.	"we chose reward based crowdfunding over lending, because it is a pre-order system. and we also use it as a go/no go for our project. If this is success, we know people want it. We can lend a lot of money but if there is no one wants to buy then".	Why not debt-based crowdfunding? I am not familiar with this p2p. That is first of all. I don't really like loans to be very honest. We together we try to avoid them, because there are so many other ways to get money. Especially with our product, which is a health related product, there are lots of subsidies available. Why reward-based crowdfunding? First of all, it is consumer product. it is very recognisable situation for many many people. Everyone wants to sleep the best way possible. And it is an accessible price point. Plus you really want to have these reviews from these communities that it works. because we won't have that objective validation. We only have subjective validation. word of mouth. that's what kickstarter basically all about. We really want to have a community around our product. So that is something we value as well. then Kickstarter is really the way to go. Why not equity crowdfunding? Possible in the future. but comparing to the VC, investors from crowdfunding are abstract but this crowdfunding business model feels like a black box and you don't see whom investors are. VC is way more open and way more simplistic. But I am not sure it is the truth.
5. What other sources is possible in the future?	VC, because of their network and knowledge	Equity crowdfunding. But currently we have polit projects so we have revenue already	it can be bank loan, VC or angel investment, or might be government subsidy, but it depends really on the type of subsidy I think.Because we do not provide products, the reward crowdfunding option is not that good. Invoice trading, might be an option but it does not always provide you the amount of the money you need. P2P business lending, i am not sure. If we would opt, we would go to traditional finance over alternative finance.	More angel capital, to bring our product to a ready-to-sell stage Mix of venture capital and bank loan. For example, if in total I need 2 million, but from one investor can be risky. So if VC and the bank puts 1 million each, risks are shared between two parties. They are both happy. So if VC puts 1 million first and it would leverage the possibility for the bank also to put money in. So risks for both parties are reduced. From VC point of view, they get 1 million equity but there is 2 million input, so their risk is reduced. From bank point of view, they put 1 million loan but they know there is a professional investor (VC) to push the business successful. Even sometimes when it goes wrong, VC is willing to put extra money on the table, not to lose their previous investment. So it is extra security for the bank. Subsidies always, because of the medical industry, there are a lot of Dutch government and European subsidies we can take a claim on.	We are still looking for goverment subsidies, angels and possibly equity crowdfunding. So that is actually now I am talking to VC now, or maybe strategic investors like production company, that is able to invest in us and other contribution besides the money only. So the production company who can produce the product and invest in us, and test the product, since they have a lot of technical expertise with the people who work there can help us. The Venture Capital who can do the same, but more on a strategic side, they can help us with legal questions, from financial management. So we are looking for investors who are a little bit more involved than equity crowdfunding investors are.	Venture capital, or angel investors. if we want to do a re-launch of reward crowdfunding, actually it is big enough. There is like a gap, if we get half a million in crowdfunding, we would not need a VC. if we get 200k and we can produce our first product and everything, the first product can be covered. But if you want to turn a project into a sustainable company, you need more than one product on the market. The development of the next product can be troublesome. We are thinking how could we do that, if we have a VC or angel on board we could cover this gap. Basically, We would like to have a professional investor on board. Because they have very different view on how the company should grow, than you and me would have generally.	Now we already decide to do reward crowdfunding. Also we are considering VC or Equity crowdfunding or bank loan. We are open to exchange equity at this stage, just before the kickstarter campaign. Because right now we are in contact with VC to talk about funding. We are checking all the option and we want to see which one fits the best. I am curious how you can convince us to do equity crowdfunding. But probably we would not choose equity crowdfunding because of the amount of effort, to set up the campaign, to make super nice video, and you have a fee that goes to Seedrs. So there is a lot of trouble, a lot of work whereas we have a couple of investors, the fund that i mentioned, are way more accessible and easy to have the same amount of money.
6. Preference of funding sources	I think Donations based, others, and maybe business lending, and it depends on the conditions.	besides innovative competition, government subsidies, venture capital, selling polit projects, actually we might consider equity crowdfunding, if the speed of raising money on equity crowdfunding is faster than formal investors (big corperate investment or venture capital)	1. p2p business 2. debt based crowdfunding 3. equity based crowdfunding	1. Donation-based crowdfunding 2. Reward-based crowdfunding 3. Equity-based crowdfunding First get the money for free, then get money and deliver a product, then get money and sell shares	1. Donation crowdfunding 2. Reward crowdfunding 3. Peer to peer business lending	1. reward based crowdfunding. 2. P2P consumer lending 3. then maybe equity crowdfunding.	1. reward crowdfunding 2. equity crowdfunding 3. P2P business lending

Equity Crowdfunding							
7. Familiar with equity crowdfunding?	Yes	Yes. Some neighbour did equity crowdfunding. I also know there is quite often a pre-campaign. they already have a big list of people who are willing to do this when they launch it. So first a few days it already goes up easily. That's why I think that actually a lot of time that goes into it. not only just launching the thing and see how it goes. It is marketing campaigns around it. people promote it on facebook, etc. I know from another company who did something kickstarter type of thing. They have a big budget for just promoting it just on facebook, paid advertisements on facebook within their target demographic. So they have been preparing it for half a year before they even started.	Yes, but he does not know about crowd does not have voting rights	Yes Old classmates they start symbid. This is how I learn about it.	Yes.	Yes	I think so. I have been talking to seedrs and oneplanetcrowd, platforms like these.
8. Why equity crowdfunding (not) on the top list?	1. Possible to choose equity crowdfunding. But we are one and half year developing, it needs a lot of time to develop. 2. With crowdfunding I have a feeling thatwe have to deliver some promises after the campaign shortly,only if we can do that, we can start a crowdfunding campaign. 3. For me without doing too much on social media, if the platform can take over the social media activities, then maybe it would be ok to choose equity crowdfunding for me. At the moment, I don't think it fit into my situation because of my product type.	We are doing two things basically at the same time, government subsidies and formal investors from companies and venture capital. For us, giving away equity is always our last resort. We would rather not to do them. So we are doing in parallel pursuing different types of funding at the same time. And then once we know where our success chances are with these, then we make a decision. We would consider VC, convertible loan, but also it depends on how much money we want. for convertible loan, some angel investors maybe give you maybe 30,000 euros, maybe up to 100,000 euros. But it is not going to be much more than that normally. But if you want to do a round that several millions. Then that is pretty much going to be VC. Possibly in the future we will consider convertible loan. Pros: Easier, faster money, business plan, video, Cons: time consuming. (<6 months) Improve platform, investor's network, not only giving money.	If there are a lot of people buying some equity right from your company, you need right institutions to manage them. From an entrepreneurial part, you want to have investors as easy as possible, because you need to have a clear direction of your company. If you have a lot of shareholders within your company, it can get very noisy in that way. On the other hand, it is also that normal investors like VC and Angels, they don't only provide money, but also knowledge, how to execute, how to grow your company. People that give you money from equity crowdfunding are normally like consumers. They do not always have the wisdom. A lot of entrepreneurs say, the first time I really knew my company was the first time I met the investor. He started to ask me all the questions that I did not want to ask myself. But normal investors they try to pursue they try to force you to a certain direction that can be most successful. I am not sure there are a lot of people from equity crowdfunding platform can contribute knowledge in that way.	only when traditional methods are not suitable or you don't want it, then equity is the right one. I prefer equity over debt, because debt can kill you but equity cannot. I prefer free over equity, and equity over debt. And I prefer traditional first and then alternative. I find very interesting about equity crowdfunding. Those are the syndicates of angel investors. So you get one or two angel investors with a good name. You put them into your campaign. They each pay for example 50k. Then their big name can leverage a lot of extra money, because small professional investors they trust the big name that has already invested. Then they also put money on the table. This thing is interesting about equity crowdfunding. If I do equity crowdfunding, I would really do through syndicates. Syndicates of course you can play a bit with it. You can also say to this investor, put your name and money, and later I will give you money back in certain way, so there is no risk for you. Let others take the risk. Here is danger of syndicates.	I think equity crowdfunding is quite an easy method to raise money and that way it is ideal. You don't have to network with the investors. It is a lot easier to find investors. But we are also interested in looking for investors who can give something in addition to the money.We know that if we succeed with this round with VC, then we need another round to build a production company. So we know there are multiple rounds are needed. So we prefer to have investors who are willing to go multiple rounds. So 1 million now, and maybe in two years, another 2.5 million or 5 million. Maybe if we succeed, another 10 million perhaps. So we are looking for long-term investors. We are not focused on equity crowdfunding. But if we feel VCs are asking too much, or if we cannot find a good VC that we think it is a good partner for us. I think equity crowdfunding would be the next option to the case.	Firstly, if you can get your money without having to give away the equity, that's why we put reward first. But the problem with crowdfunding is you have to put quiet a bit of effort. It is not just five minutes video from the website. You have to meet people, a lot of people. That also cost a lot of time. Maybe it is wise to put more time into less people, but therefore higher chances of passing.	we are contacting VC and we are also considering equity crowdfunding at the same time. We are checking all the option and we want to see which one fits the best.
9. What are your concerns of equity crowdfunding?	Deliver a promise after the campaign shortly;the amount of work you need to for the equity crowdfunding; Business model; not good with social media; If crowd can contribute more than money such as network, then it is possible. For me without doing too much on social media, if the platform can take over the social media activities, then maybe it would be ok to choose equity crowdfunding for me. I thought about it at that time. At that time I didn't think it was very useful for me at that stage. Maybe now it could have changed. But still I think it is not the wisest thing to do. It is a bit gut feeling of course.	possibly time, possibly not getting knowledge and network that you would get from a company or a formal investor, depends on the business, if you are in a specific B2B niche market where the solution makes a lot of sense to the market but you can only understand if you know the market. it is going to be difficult I think for those EC platforms. Maybe I am wrong, maybe it is doable, but that would be my concern. My company is B2B but at the same time we would have a fair shot at those platforms, because the idea Wifi powered sensors is just a sexy idea, that's why we won innovational rewards quite easily, because we have a good five minute pitch. I think ours could still work on there, because it is a big idea. I think we can actually maybe do it. So we do consider it. If there is a program where investors from EC cannot only invest their money but also outline what else they can give you in terms of knowledge or business connections, that would be more useful. Maybe they should be linked into a linkedin profile something as well. Some guy who lives on the next street he wants to put some money in there or a CEO wants to invest his private money and has a massive network to support it. That is very different type of people who might put into that crowdfunding thing. Maybe just more about getting money because there is a lot of money in the market. So many investors, so many options, so just money alone is not super interesting. That's everybody is doing. So it has to be a bit more than that I think.	Actually it is the information we are lacking. The reason why you even have to ask me what equity crowdfunding is and I did not know about voting rights. That is the information we do not get as entrepreneurs. I think that is the biggest structure failure. It has not been the environment that i am working right now. It is the biggest tech incubator in Europe provided the right means what it is.	1. not smart capital. I think if you decide to do equity crowdfunding, I think you already decide you do not need smart capital. But if you present to me now with medical technology only, in which I know guys are investing are doctors, distributors, then I could consider to enter. So this concern can be solved by more specialised platforms. Then I do not feel like a fool standing next to the retail shop of beers. If I am in the middle of all kinds of medical technology firms, then that would be interesting. 2. it should not go out to the open. I am a company and I need money. This is something usually I do behind the scenes. Nobody needs to know I need money. So it maybe easy to cover to make a hidden profile that is only visible to the investors you select. I did see equity crowdfunding platforms that taken extra role on this. because if i am not wrong I think Symbid they use their voting rights for the crowd. Lets say they raise 20% of the investment. Then one of the guys from symbid will be on the board to co-controlling the company. So they still play an active role. So people who deliver money, they do not. But platform in the middle is shareholder. By law, shareholders have certain rights. So they can execute those rights. So if I am with an angel investor. I can look him in the eyes. I can feel in what sense I want to work with this person. I know he has network, etc. Then I am Ok with him using his voting rights. If I use equity crowdfunding, I think as a company I am taking extra risk. You do not know who you are doing business with.	The main concern or objection against equity crowdfunding is mostly if you do very small tickets, it is only money or not additional services or expertise or experience from someone you can use. But I do think if you don't have a network with venture capitalist or angel investment, or if you feel they have too strict terms on you, especially for VC they have a lot of additional terms in a contract that might be even worse than the equity you have to give up. That is one of the positive things about equity crowdfunding, it is very low-key, and you just transform your equity into an investment. There are no additional terms usually. So in that sense, if VC or angel investors are asking too much, then equity crowdfunding can be interesting to entrepreneurs as well.Also, big angel investors they do not want to be publicly visible. So they do not want to be known as an investor in the company. They just want to keep it provide. For them to participate, it is hard to be on the platform as a showcase to rest of the investors.	If you look at professional investors, they have a lot to bring into the company as well. They are very experienced. I am not really sure about the equity crowdfunding that the investors would add value into your company. Crowdfunding cannot adding values as much as traditional investors can do. Also, I am not sure with equity crowdfunding if it is possible that we can choose investors to be on board or not.	my concerns are I feel there are tons of people, involved in some, because everyone gets a small piece of your company. So you end up with pieces of equity laying all over the places but these people you have never met in person. That is weird. Because I feel like everyone owns a bit piece of your company I want to meet him in real life. In some way they are related to you even though it is a small piece of equity. So these vague amount of people that own small piece of your company. But on the other hand, for investors, they invest money in our company but they didn't get voting rights and they did not meet us in person. It is from both sides. Maybe these barriers could be broken to make it a little bit more personal. I feel the fundamental issue is the trust. we need to trust each other. I will do stuff with their money, and they hope we can be super successful. the platforms have a lot of drawbacks and responsibility.
10. Do you know anyone who choose equity crowdfunding and why did (not) they choose it?	Yes. It is because of their business model, such as a company who manages investment from crowd to develop a solar partk, and this company sell the solar energy to another energy company and return the investment back to the crowd investors.	Our neighbour Kindow in Yes!Delft I saw a big screen with the campaign how much percent they were funded. There are some reasons formal investments are never going to work. For example, in companies they invest, they quite often want you to have a product on the market already. You might not be there yet. So companies it may not be interesting. For VC firms, they look at a bit differently as well. So they might want you to have a lot of patents for example. So if you do not have those patent yet, for early stage start-ups, maybe equity crowdfunding could be interesting as well, where an average guy can buy a vision of the company which is going to be amazing, even though, professional investors may be more strict to say well. That's why it might be hard to get money from professional investors. Also with EC, if there are 50,000 people on the platform. If there is only 1 % of the people who say yes to a campaign, there are 500 people. That is enough already. That is kind of a number game as well.	Bolt Mobility from Yes! First I would suggest that you need to look at indeed in what type of industry people involved. For example, you have a company need to do 5 years research before they can go to the market. Then equity crowdfunding is not interesting to them. For example, a company in aerospace sometimes takes 10 years before a product can launch. Those really tough technologies, they need subsidies. So those companies are not interested in equity crowdfunding. However, I think the companies are more B2C related, have developed first product prototype, or know for sure they have a contract they can deliver to. Then equity crowdfunding can be very beneficial. The thing about the crowd is they have a short-term perspective. I am not sure how many people are willing to put certain amount of money into company, very risky, and have to wait 7 years. That is a lot of time. What I did know is, if you have a bunch of investors, i need your money for the seed, after 2 years, if the company is growing, you can take it over and you get a lot of money back.	I think I only know one company. This is ProGauntlet, in Yes!delft. They used Leapfunder. It is convertible note but I consider it is equity. Even today it is a loan but later it will turn into equity. They already had an angel investor. This angel investor simply put money through the platform. So they did not do a public campaign. they just used the legal structure of Leapfunder to get this done. So it is not an equity crowdfunding campaign in a traditional sense. They were basically lazy and did not want to hire a lawyer so they put it through the platform. This is my opinion.	Molt Mobility they choose it because they think it is easier raising money that way. They are probably right, although still it takes time but it is easier to find investors, because they are on the platform. I think they are right about it. That is the advantage of equity crowdfunding.	Yes. Bolt Mobility from Yes!Delft. So with equity crowdfunding, you can reach a lot of people and save time that way. Then you have to increase the minimum investment amount. But i f the investment is below 100k euro; you have to do a massive financial disclaimer. You have to go through the AFM, it is a Dutch governmental financial protection. They have a consumer product but their product is expensive. At least it is 3,000 euro. And they need an awful amount of money, like 15 million. So reward-based crowdfunding does not work for them. That's why they choose equity crowdfunding.	not really because in the early stage of the company we have to avoid giving away equity. Also, most of the companies in Yes!delft incubator are not B2C product. I feel like the equity crowdfunding is really something made for consumer products. I have the idea that equity crowdfunding is a bit new. Within yes!delft, it is not really encourage it or name it as an option. I found out myself that it exists. But within the incubator, within the program, you are not confronted with equity crowdfunding.

Recommendation for EC							
11. How to attract more entrepreneurs from equity crowdfunding platforms?	You have to be very active on social media right? That's constraint for people who are not active on social media like me. Actually I am not very interested in social media. So it is a personal thing that constraints the decision. If the investors can contribute more than money, and the platform can help entrepreneurs like me who are not interested in social media, then its possible to attract more entrepreneurs.	In terms of the speed, I am not really sure how fast it takes comparing to formal investors. For VC it is easily more than 6 months. So if equity crowdfunding takes less time then more start-ups may consider it. Also, for knowledge and network, equity crowdfunding cannot really provide entrepreneurs.	Make exit strategy more transparent and flexible. It is normal in seed stage funding that you need more series later exponentially. I think the crowd cannot contribute anymore. If the equity crowdfunding is a only one time thing, then you need to guarantee the new investors next round can buy the shares from equity crowd investors. Otherwise they may not be interested. But also it matters how much equity is giving away to the crowd. If it is only 5% then it is ok. but if it is 20% 30%, then it is a big deal. The new investors want to know if they can buy shares from crowd otherwise their rate of return would not be enough. What I would do, if I run an equity crowdfunding platform, I would do very specifically on the seed. So I would say, it is only for 1 year or 2, and then you are guaranteed to know if this company will grow very fast or you will lose your money. Second thing is, I would make a diverse portfolio if possible. I will say don't put your 1000 euro in one company, put your money into a fund, we will invest into 100 different types of companies then you will get your money back.	I have to specify my recommendations to high-tech industry, because I think for beer brewer, they are doing a pretty fine job already. Let's say high tech industry, fast grow, scalable start-ups, I think they can do more there, by improving the quality of the platform of the investors, but more certainly of the start-ups or the companies that are accepted on the platform. Me: This is hard. According to lemon market theory, because of information asymmetry, good projects, good investors will crowd-out. It would be really hard to achieve. I agree. This is maybe why in this high-tech sector equity crowdfunding platforms are not going to make it. Ideally companies are on these platforms, they are second time founders. They already have experience. They have 1,2,or 3 patents. They have a functional prototype. If there is a guy saying if the crowdfunding reaches this target, I will double my investment whatever. That would be ideally. But this is ideal when you are already this far, once you have reached the stage I described, you can go to any investment funds. For me it is worth consideration to have a crowdfunding campaign, compete with what invest funds (VC) offer. Now I have multiple investment funds (VC) compete with each other. I think it would be a nice extra. Of course if crowdfunding platform offers something nice I will take it that is more than money and shares, such as network or distribution, etc.	I think mostly it is a matter of creating awareness among entrepreneurs, from platform side. Also for investors, regular people who would be interested in spending some of their money on start-ups, even if you only have 1000 euro to invest. It is still nice to do because you can follow the company and see how it goes. In the training program with Yes!Delft for the first 6 months, it is not really something highlighted among options for financing. So you have Venture capital of course are involved in Yes!Delft. They have networked with VC that come here and get to know companies. Rabobank is really involved. So that is one of the options. Rabobank also has a network of angels. So Rabobank sometimes can combine a loan with angel network that they can use. But actually crowdfunding is not something that they discuss in the program. So maybe it is something Yes!Delft could look at to invite maybe some platforms here what they do, and why it is interesting.	1. if the platform can categorise investors and entrepreneurs can select what investors can see their projects and select the ones who have knowledge and expertise in related fields. 2. if it is possible to combine the feature of traditional investors and crowdfundign investors togeher, that on platform, if it is possible to invite some experienced investor on board, that is also helpful, because entrepreneurs are not only looking for money and they want to know whether investors can bring knowledge or expertise into the company as well.	Equity crowdfunding platforms may work closer with incubator. So incubator possibly can promote equity crowdfunding as an option to startups, since right now from my own experience, equity crowdfunding is not named as an option from yes!delft to entrepreneurs. Actually I have been talking to Seedrs for a while. They also approached yes!delft. but i think it didn't happen. I don't know why but probably it has to do with money. Because if Seedrs wants to be partner with yes!delft incubator they probably have to pay 25,000 a year. Because that's their business model to fun business for incubators. Because companies want to do business with start ups and they are willing to pay big money for it. I am sure Seedrs does not want to pay because they think they are helping startups to raise money, why would they pay to help people?
12. Other recommendation	For investors, it is like a bit gambling. So if you can do it more professionally, and you can reduce the risks. You know it is a good team. You know there is attraction from the market. You rule out all the risk factors. You have a risk mitigation plan and you can disclose it and people can put money in. And it is very structured and organise. Then I can see more investors can be attracted.	I do not know that much as it is right now. but I can imagine it could be an advantage if there are five thousand people giving 100 euros. There might be 10 people in there who have really good network or actually who work at a company that would be very good for your start-up if you are in that company. So platforms can also list how investors can help your start-up, instead of only giving that 100 euros. That would be more interesting I think. Those investors who can provide knowledge and network do not get more equity but they can increase their odds of their investment becoming a success.	I think through this method, also you show a lot of professionalism to entrepreneurs. If you say, for example, we are going to invest in the funds. You select 50 start-ups and you are one of the start-ups as entrepreneurs that have huge potential. Then I already feel much more talking with a professional organisation than some kind of platform wants to put some money into my company. So the approach behind it, how they want to spread out risks, also as entrepreneurs will see they understand how investment works, and entrepreneurs have more trust to those platform guys. So they need to show the company how much money in the fund, on the other hand, they need to communicate to the customers, they got 50 companies coming up and we want to go to 100 companies, then we are going to launch the So you need to get both parties attracted. Platform is like a broker. A broker has a function to communicate as entrepreneurs to the investors, and vice versa.	So my ideal platform 1. high quality for startups, 2. market segmentation focus. Good market focus of medical technology of the platform, I will be there. 3. create investor profiles, that my investment proposals are only seen by this type of people, such as doctors, surgeons, So if someone owns part of my equity, I want smart and experienced. if you want to make a platform like this, then you need super large coverage to get high quality start ups, high quality investors. So you need to become the biggest or most specilised platform in the world to be able to achieve this.	I think it could be useful if they also seek more collaboration with traditional funding methods. Now if they would collaborate with banks or VCs, then the companies who go to banks and VCs maybe hear from them, for example, if you need to raise a million, the bank is willing to do 500k, that they introduce you to a crowdfunding platform and say, Ok, it is really easy to do rest with us. Most banks and VCs are always looking for co-investors. Usually they don't do it all by themselves coz they want to share the risks. So I think it could be helpful to seek collaboration with traditional funding instrument. So different types of funding sources can stack together, and come to the right investment you need. You see with banks and VCs, like I said I am talking to a bank now and also a venture capitalist. Maybe if there is another gap in my fundraising for 200k, I can easily go to a crowdfunding campaign. We have a bank doing part of it. We have a venture capitalist doing part of it. Then it should be quite easy to do the rest among the crowd, because they also get to see this is a serious company. It has been analysed by venture capitalist. The due diligence has been done. It would help a lot. It is like the lead-investor. If the bank or VC is taking the lead, there is a lot of trust for the people in the crowd to invest along.	on equity crowdfunding platforms, entrepreneurs can target their projects to certain type of investors on their homepage to show their projects.	Platform perspective I would like it to be very personal and transparent, make it more personal. That's something I keep on repeating it. To really see who is this person to get us as much information about the one you are investing in and who is your investor. So you should really see a face, a name, his hobbies, that's the trust i prefer to have beforehand. that is I feel like very important. So everyone, entrepreneurs, platforms, investors, should see each other. Platforms should be transparent, who is working with you, and currently handling your project, who is the entrepreneur behind the project, and who is the investor. Platform should provide this transparency. Because for reward crowdfunding, I do not care how buys it. It is a small amount of money. They don't have a piece of your equity. It is fine. The fundamental thing for equity crowdfunding is the trust and transparency. And currently not what I feel like being offered. But then the platform should also handle privacy well. Platform should make it possible to have portfolio based accessibility. Investors can select who can see their profile, to make it more personal. So entrepreneurs can see who the investors are. If an investor who wants to invest in me, does not want to show his profile, because of privacy reasons. Why should I trust him. So I have not run an equity crowdfunding campaign, I am not sure how exactly it works but this would be the recommendation and my expectation.

Part 2 Feedback for assessment tool							
13. Easy to understand?	About the question itself, I think the questions are OK. It makes sense. Just maybe you can make it into two pages.	The questions are not hard to understand, it is fine.	If I look at questions and the answers of the questions, I think the funnel is well done. You start first do you want to give away equities, then you talk about percentages, then you talk about different ways of funding. I was actually only having questions about large investments. Why is it there? Also the human capital one, about MBAs in executive board, I would say MBA is a bit outdated now. It would be very good if you use in your thesis also explain what exactly do you mean about the campaign. And also you opt for MBAs, that you have a reason to ask. Actually it looks very good. The last question, about friends and family, this campaign would run on platform right?	I am not sure about this scale, because of the "no" here is very serious. Actually you give the same score to the questions of different importance. So if you sum up the scores at the end, maybe you will get the wrong answer, because some of the questions would get extra weight.	I think it is quite easy to understand. I have some remarks on some of the questions. For example "large percent of equity or smaller percent", I would answer this 16% or more, because it depends on how much money i want to raise and how much is my valuation. Maybe you can say are you willing to offer a large percent of equity, maybe a little bit more clear. I had a question about first sale, coz we have had our first sale, we had some revenue, but it is all based on our pilot project. Is it product sale or anything as long as it is revenue? Because I think revenue sounds broader than product sale. I was thinking does it mean a product sale or anything that you can make money. Because we had revenue from pilot project from one company, and consulting fee from another company because they want to use our product. For the large investment part, I was wondering what large investment would be. Maybe if you phrase like: "if there is one investor who is contributing large percentage (for example, 30%) of total target of the campaign?" that would be better. If 30% is the mark threshold if it is successful or not, maybe it is also good to specify 30%.	Yes.	the questions are easy to understand
14. Does category, success factor and scales make sense to you?	So you get numbers and you get a score. The idea is this test for me if I make it, I make the sum of this scores. Between this value and this value, it is not suitable to do it. Between this value and this value, you should look more into it. something like that.	Yes. It makes sense. But I do not know when you should go for equity crowdfunding. It is hard for me to say these are the right questions. I think that is something you can ask equity crowdfunding platform people much better. Coz they know very well what companies they want and what companies what do not want to have. I have no idea what the outcome would be. I cannot really say anything.	I think it will. I am just wondering why you choose 5,3,1 score What do you mean by "shared public profile"	The score of 5,3,1, can I also pick 2 or 4? Me: Not really. It is for better differentiation for score later. Then do not show the score to me. Just make tick boxes. So it is better to show score later. What is the executive board? Managers? Managing partners? So definition of executive board can be good. What is large investment? What is public profile? facebook? Maybe then the option can be, they do not have a public profile but they are willing to show their public profile, something like that. for our angel investor, you cannot find him on google. Even his email address is anonymous. He does not have a public profile but he will be willing to make one if we are going to participate on equity crowdfunding campaign. "Support first five days of campaign", sounds to me for the company to survive or marketing expenses. So it's better to use invest. Then the rest is good to me.	Yes I think it does. I don't have problem answering those.	Intellectual capital is the only question that needs to be rephrased. The options do not cover what I have. I have applied patent but I do not have it yet. It can take up to a year. For the rest it was clear. But I would not put the score. I see the 5,3,1, So I know the higher the better and I may speculate. Maybe you don't show the number until it's chosen. So it can be an online tool after choosing an option, then the value shows. Or I am sure you can do it in excel too. If you put a cross here, then there is a value there.	I feel like what is the score for. Because I want to know why I am doing this scoring? So i think it is better to make it ABC, then it is equal, and makes it as neutral as possible. The answers already give away a little bit what is the best option. Have you received grants, or patents for IP, why not take them separately? Now there are two questions in one question. If literature were combined, it would be fine. Any of your executive board is MBAs. In our case, we finished our bachelors. Now I did not have any options, because I have a bachelor, but I am working on my masters. So I would not have any board members who have master degree above. Maybe it should be something about advisory board as well. I would definitely include advisory board. They have great value to company. About first five days of campaign. I think this is also the community right? Because I am not sure my friends and family would invest if I run an equity crowdfunding campaign, I assume they would. But with the 2,500 registered we had on our website, this community would definitely invest in the first five days. So you should probably delete "friends and family" in the question. That is already very open question. And you should specify the threshold of amount of point you should have to be successful.
15. What category/factor do you think is also important but missing in this tool? What are they?	B2C or B2B because it makes a difference to the crowd, also business model matters. Also maybe some personality factors would influence decisions of entrepreneurs whether to choose equity crowdfunding? For some personalities maybe crowdfunding is more appealing to other personalities. Now you are looking very much on the business factors, which is quite OK. But I think there is also emotional, and human side.	B2B or B2C can also be a factor for the crowd. B2B would be more difficulty for unprofessional crowd to understand.	I think the companies are more B2C related, have developed first product prototype, or know for sure they have a contract they can deliver to. Then equity crowdfunding can be very beneficial.	social media present can you leverage enough followers into paying for your campaign. this is maybe too much based on the reward-based crowdfunding. But also it might be true about equity crowdfunding. So I think it plays a role. Of course your friends that gave money. But if you reach tens of thousands of people on your own. A lot of them will pay. So if you reach a million. maybe you already will have the money. This is what I thought immediately. I think also if I would invest in a company, I would be pleased to see there is a guy somewhere in his thirties, he has already done one or two or three companies before. So I think serial entrepreneurship is a thing here.	I do not think b2b or b2c would make a difference on equity crowdfunding, but i believe b2c is a lot easier to raise money on reward-based crowdfunding For human capital executive board members, maybe also non-executive board members could also be relevant. Whether they are experts from the field, whether they have MBAs, whether they have complimentary skill sets or knowledge. It is good to have different kinds of personalities and different kinds of skills, diversity in the team. So human capital would be the main recommendation for this list. Also future outlook, I think something it is really important when it comes to recurring sales, if you actually have customers that keep purchasing your product. So recurring sales stream. If you have an app, and you know people who come back each time to buy your product, I think it is really important. For us too, if a product has been completely developed and we have a contract with certain customer like a robotics company, we keep on supplying them. Then we actually have a first sales contract in place. That would be a really decisive factor I think in a successful equity crowdfunding campaign, because then your business is quite stable, you can just keep making revenue.	B2B or B2C would make a difference.	B2B or B2C can also be a factor for the crowd. I feel like the equity crowdfunding is really something made for consumer products. Also, there is nothing about marketing I believe. Marketing team, maybe that is a good idea to have table of content of business plan and see if there might be something missing. Also about pilot projects, trails, there are different words. What is exactly you think it is a pilot? Because you also have some trials and some other things. "user testing" I don't know. Maybe you should have a definition list so people can see hey this is what is meant. Because if I only give the pillow to my mom for one night. I think I score very high but it is not the case. To make it more measurable perhaps to all the answers. SMART, specific measurable, realistic, etc. Because then you are super sure about there is no confusion.

16. Do you think this research is useful or applicable in real life?	"I think it is useful, because it is quite a new phenomenon. It is important to raise awareness about equity crowdfunding, and also the risks about equity crowdfunding, which is not totally transparent. I think it would be beneficial to society, that if you have some kind of screening. So in that sense, yes, it could be useful. But I think you still need to do a lot of research on this. I think there is also a lot of psychology behind this."	Is this the chances of them actually succeeding in crowdfunding or is it that they are applicable to do crowdfunding, because I think those are two different things. Applicable it means that you even would be a candidate to do that. But if you want to know if it is succeeding, you have to ask a lot more questions probably. Basically the same questions investors would ask. There is no question in here about the team. For example, two or three months ago, we hired a CTO he did his PhD here. He wrote some books about radio frequency energy harvesting. He is one of the best in the world in doing this. That would not show from this. Even though that massively changes our chance of success. It would not show from this assessment tool. So you want to have sort of assessment of the strength of the team but that might be hard to do via your questionnaire. (Me: It is only a pre-screening tool) Exactly, that is how you should probably use it as well. It could help them not to waste their time. It could show equity crowdfunding is an option and it is good to know. So I think this assessment tool can be a pre-screening thing. But after that you still have actually interviews.	YK:This is the thing. What are you going to do with the result of this thing? Me: I think it is useful for entrepreneurs, platforms and accelerators, because you don't have enough information and you have not heard too much about it. If you ask individual platforms about what they offer, how it works, you will be approached a lot by different platforms, instead of knowing first whether you will have a big chance to get money from equity crowdfunding platforms. So if entrepreneurs only want some information, it can be an elementary package for entrepreneurs. YK:That way. That makes sense. It looks good!	Yes. I think so. But somewhere I think you should also say the claim is not that EC is better than other ways of funding. Yet EC is booming, there is not a lot of research, or the sample is small, or the entrepreneurs they are not well informed. So your research tries to change that. First you need awareness. Then you need to understand can i use this funding option, yes or no. And then you make a strategy. So OK usually awareness, you do the assessment tool if you could use EC. So these are two important steps. the third step is to make a strategy. What I try to say, even you have a perfect score here in your assessment tool, this does not mean to me you have to do EC. This is only a recommendation. It is useful. how it is now? i could already give the start-ups that I coach. The moment I say equity crowdfunding, I could say hey i have something nice here. And then you know you are on your way. Many of this questions I would ask already based on the experience, but it is nice if it is available on a equity crowdfunding platform website. So if you have an assessment intake or to make something bigger, to assess all funding options.	Yes, I think so. I think definitely it is useful. Like I said before, equity crowdfunding is a new method of financing which is not too known yet. But also it has a lot of advantages compare to traditional financing methods. I think real easy to connect to investors, that whole process is finding VCs or angels, the problem of I do not have a network among these investors is not really a problem anymore, because you can go online showcase of your business and find investors. Second advantage is that, these investors do not require too much. They do not need additional terms that can really wipe you out as a founder. So that makes it a good option. And I think some they do not want their investors to be too involved with the company. We like it, because we think it can help us but other companies think they know what they are doing, they do not want to have someone who is always going to be there during board or shareholders meeting, and constantly asking me questions about everything I do. That is why Bolt decided to do this way. I think that could be an advantage too, not having to give voting rights to other investors and having them constantly looking at you and asking for information, because VCs always want a lot of information on how you are doing financially. They want to know what you are doing, and they want to make sure you follow the right strategy. If you feel you know what you are doing and you want to keep control among your founding team, that I think equity crowdfunding can be a very good option as well.	Yes I think it will be. Because i think it can give you a quick insight if it is something for you. It would be useful if you can compare with reward based or something like this research.Because you want this before you specifically start thinking about equity crowdfunding because you score it very well, so it can be in a big package. To go to this big package and you can decide whether reward crowdfunding, equity crowdfunding, or other types of funding can be good.	Yes. Definitely. What I really like is that you have made it very concise assessment, and it only takes me two minutes but I already got a way better understanding of equity crowdfunding. Absolutely, I think what you do is really important. It is not time consuming, I did it in two minutes, and it identify immediately what the weak points what I should work on.