

ENTREPRENEURSHIP ECOSYSTEMS IN THE EXAMPLES OF
PORTUGAL AND ESTONIA

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ABSTRACT

The time we are living in can be considered an era of the revolution of technology and increasing interconnectedness, that has been caused by the ever-enhancing globalization process. As a result, various novel concepts pertaining to the new economies, technology and entrepreneurship have emerged. This dissertation has set the focus to explore the concept of entrepreneurship ecosystems, which is used to describe the actors, the interconnectedness occurring between the actors and the overall environment where entrepreneurs and startups operate in. The aim of the thesis is to assess what drives the success of said ecosystems, how can such favourable environments come into being, and to provide insights as to how two relatively small European countries in the opposite ends of the continent, such as Portugal and Estonia, have managed to emerge as significant startup hubs. In order to achieve the research objectives set and to answer the research questions posed, primary research in the form of conducting semi-structured interviews with the actors operating within the Estonian and Portuguese entrepreneurship ecosystems has been performed. Based on the primary data collected and the secondary data reviewed analysis has been performed by using qualitative research methods and conclusions have been made accordingly.

Keywords: Entrepreneurship, New Firm Growth, Startup, Startup Financing.

JEL Classification System: L26, M13

ABSTRATO

Os tempos em que vivemos podem ser considerados uma era de revolução tecnológica e de aumento da interconectividade causada pela crescente otimização do processo de globalização. Consequentemente, têm emergido novéis conceitos respeitantes a diferentes tipologias de economia, tecnologia e empreendedorismo. Esta dissertação foca-se em explorar o conceito dos ecossistemas de empreendedorismo, usado para descrever os atores, a sua interconectividade e o ambiente global onde os empreendedores e as *startups* atuam. O propósito desta tese é avaliar o que leva ao sucesso dos referidos ecossistemas, como é que tais ambientes favoráveis se formam e proporcionar uma visão de como dois países europeus relativamente pequenos, situados em polos opostos do continente, como Portugal e Estônia, conseguiram posicionar-se enquanto centros importantes de *startups*. De modo a atingir os objetivos pré-definidos da pesquisa e dar resposta às questões por ela levantadas, foram conduzidas entrevistas semiestruturadas com os atores que operam dentro do ecossistema de empreendedorismo da Estônia e de Portugal. Com base nessa informações e após estudo de outros elementos, foi levada a cabo uma análise pondo em prática o método de pesquisa quantitativo, sendo tiradas conclusões em conformidade.

Palavras chave: Empreendedorismo, Crescimento de novas empresas, *Startup*, Financiamento de *Startups*.

JEL Classification System: L26, M13

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INDEX

ABSTRACT.....	I
ABSTRATO	II
ACKNOWLEDGEMENTS	III
INDEX	IV
LIST OF TABLES	VI
LIST OF FIGURES	VII
1. INTRODUCTION – EXPOSITION OF THE CONTEXT OF THE ISSUE.....	1
2. LITERATURE REVIEW	2
2.1. Entrepreneurship, entrepreneurs and startups	2
2.2. Entrepreneurship ecosystem.....	4
2.3. Actors of an entrepreneurship ecosystem.....	6
2.4. Key drivers of an entrepreneurship ecosystem	8
2.4.1. Pillars of an entrepreneurship ecosystem	8
2.4.2. Domains of the entrepreneurship ecosystem	11
2.5. Measuring entrepreneurship ecosystems.....	12
2.6. Summary of the literature review/conceptual reference framework.....	13
3. METHODOLOGY AND RESEARCH DESIGN	14
3.1. Methodology	14
3.2. The research objectives and research questions.....	14
3.3. Data collection methods	15
3.4. Interview participants.....	16
3.5. Interview structure.....	19
3.6. Data analysis process	20
4. RESEARCH FINDINGS	22
4.1. Defining the concept of entrepreneurship ecosystem	22
4.1.1. Understanding the term	22
4.1.3 The importance of entrepreneurship ecosystems.....	24
4.1.4. Actors.....	24
4.2. Drivers of the entrepreneurship ecosystems and the interactions within	29
4.2.1. Key drivers as perceived by the actors of the entrepreneurship ecosystems.....	30
4.2.2. Drivers as per the literature review.....	33
4.2.3. Connections/Interconnectedness	35

4.2.4. Building vs. evolving.....	36
4.2.5. Economic development strategy.....	40
4.3. The entrepreneurship ecosystems in the examples of Portugal and Estonia.....	42
4.3.1. Introduction	42
4.3.2. Snapshots of the countries analyzed.....	42
4.3.3. Evaluation based on the interview respondents.....	46
4.3.4 Characteristics of the ecosystems in Estonia and Portugal.....	49
4.3.5. Attractiveness in terms of investments	56
4.4. Summary	58
5. DISCUSSION OF THE RESEARCH RESULTS.....	61
5.1. Introduction	61
5.2. Answering research question #1	61
5.2.1. Key drivers as per the interviewees.....	61
5.2.2. Key drivers as per the World Economic Forum (2014)	65
5.2.3. Key drivers as per professor Daniel Isenberg (2011).....	66
5.2.4. Conclusions	66
5.3. Answering research question #2	68
5.3.1. Portugal.....	68
5.3.2. Estonia	71
5.3.3. Conclusions	74
5.4. Answering research question #3	74
5.4.1. Portugal.....	75
5.4.2. Estonia	76
5.4.3 Conclusions	76
6. CONCLUSION.....	77
6.1. Conclusions, implications & a teachable point of view	77
6.2. Limitations of the study.....	79
BIBLIOGRAPHY	81
Electronic documents	82
ANNEXES.....	85
ANNEX I - Interview questions for the Portuguese interviewees	85
ANNEX II - Interview questions for the Estonian interviewees.....	86

LIST OF TABLES

Table 1 -The list of interviewees from Portugal 17
Table 2 - The list of interviewees from Estonia 18
Table 3 - How do entrepreneurship ecosystems come into being?39
Table 4 - Key economic country facts42
Table 5 - Snapshot of the 2019 country data.....43
Table 6 - Key figures about the Lisbon and Tallinn ecosystems44
Table 7 - Evaluations of the ecosystems by the respondents47

LIST OF FIGURES

Figure 1 - The Eight Pillars of Entrepreneurial Ecosystems.....	9
Figure 2 - Components of the Entrepreneurial Ecosystem Pillars	10
Figure 3 - The central themes presented in the literature review	13
Figure 4 - The themes established based on coding and categorization	21
Figure 5 -The key terms used in describing the concept.....	23
Figure 6 - Lisbon Funding & Exits & Figure 7 - Tallinn Funding & Exits	45
Figure 8 - Top ratings for Lisbon per category	45
Figure 9 - Top ratings for Tallinn per category	46
Figure 10 - A synthesis of the key drivers of a favorable entrepreneurship ecosystem	67

1. INTRODUCTION – EXPOSITION OF THE CONTEXT OF THE ISSUE

The 21st century world is a particularly fast paced one, where change is one of the main constants people have learned to rely upon. The time we are living in can be considered an era of the revolution of technology and increasing interconnectedness, that has been caused by the ever-enhancing globalization process. Our economies are faced with relatively novel concepts as the sharing economy and the gig economy, which have led our society to the point of having to rethink our current ways of life and how we work. As a result of these processes and developments, the era we are living in, can also be considered the revolution of entrepreneurship and startups. These concepts play an important role in the new economic and cultural reality we are facing.

The master thesis is focused on the emerging term of entrepreneurship ecosystem, which is used to describe the actors, the interconnectedness occurring between the actors and the overall environment where entrepreneurs and startups operate in. The aim of the thesis is to assess what drives the success of said ecosystems, how can such favourable environments come into being and to provide insights as to how two relatively small European countries in the opposite ends of the continent, such as Portugal and Estonia, have managed to emerge as significant startup hubs. In order to complete the empirical analysis of the relevant research questions were identified to set the appropriate focus for the overall dissertation writing process. The research questions posed have been outlined below:

- 1. *What are the key drivers of a favorable entrepreneurship ecosystem?***
- 2. *How have Portugal and Estonia fared with regards to these drivers?***
- 3. *What has caused these two countries to emerge as startup hubs?***

In order to achieve the goals that have been set with the dissertation and to answer the research questions established, primary research in the form of conducting interviews has been performed in both Portugal and Estonia in order to obtain the necessary data. The author of the master thesis has interviewed various actors of the respective ecosystems in both countries to get their views and insights on the topic. In addition to that a variety of articles, documents and reports have been examined. Based on the information collected an analysis has been performed, conclusions and the relevant recommendations made.

2. LITERATURE REVIEW

The following chapter lays out the theoretical framework for the dissertation, by presenting a literature review of the main topics covered. The review begins with an introduction to the terms of entrepreneurship, entrepreneurs and startups. Secondly, the central concept of an entrepreneurship ecosystem and its characteristics are outlined. From there onwards the counterparties that have been identified as the main actors operating within the respective ecosystems will be presented. As the next step, the key drivers of entrepreneurship ecosystems based on the literature reviewed and analyzed will be described, which will be followed by the outline of how such ecosystems could be measured. The aim of presenting the aforementioned key terms and concepts is to provide a solid foundation for the empirical part of the dissertation. This chapter is concluded by the conceptual reference framework that serves as a visual basis for the chapters that follow.

2.1. Entrepreneurship, entrepreneurs and startups

Entrepreneurship is a term that is rather commonly used, however the academic world has provided a variety of different explanations of the concept. Professor Howard Stevenson for example has offered the following working definition of it: “*Entrepreneurship is the pursuit of opportunity beyond resources controlled*” (Stevenson, 1983, 1985, 1990 as cited in Stevenson 2000:1). Eisenmann (2013) has gone somewhat further into explaining the specifics of the definition, by outlining that the word “*pursuit*” is used in this instance to stress the singular, relentless focus that an entrepreneur must possess, as the window of opportunity of a successful idea is rather short, which then creates a specific kind of urgency that well-established companies rarely have. Secondly, he points out that the “*opportunity*” aspect of the definition implies the novel and innovative nature of such businesses, as they are often pioneering a new product or a business model, creating a new improved version of an existing product and/or targeting an existing product to new customers. Lastly the “*beyond resources controlled*” aspect in this case is referring to the resource constraints that most new ventures must face.¹ Entrepreneurship can often be identified as a driver of economic change, innovation and social

¹ <https://hbr.org/2013/01/what-is-entrepreneurship>

progress, while at the same time providing an expansion of opportunities and revealing the initiative of citizens.^{2,3}

Aaltonen (2016) has outlined that entrepreneurship does not simply rely on undertaking entrepreneurial activities, but it also requires from the individuals, the entrepreneurs, to have passion and an entrepreneurial identity. This point highlights the central role of an entrepreneur in the concept of entrepreneurship. Who is an entrepreneur? As with the concept of entrepreneurship, the definitions can vary from author to author. Schumpeter (1965) for instance, has characterized entrepreneurs as the people, who take advantage of the opportunities in the market via means of technical and organizational innovation. Hisrich (1990) has noted, that an entrepreneur can be described as an individual, who is able to show initiative and creative thinking, who can turn the resources possessed into practical use and who has the willingness to accept risks and the chance of failure. Entrepreneurs as such, are certainly of the utmost importance in the creation of prosperity and economic growth.⁴

For the purposes of this master thesis, it is important to distinguish the term entrepreneurship from the term startup. Isenberg (2016) has highlighted his concern over the fact that entrepreneurship is often equated with startups. As per Investopedia, a startup can be defined as a young company, that is in the early stages of its operations. They are generally small in size and at first primarily financed and operated by a small number of founders. Their aim is mostly to provide a product or service that is not available in the market or that the company believes that could be offered in a better way.⁵ Startup movements are today seen as a priority for the policy-makers. As entrepreneurship and startups are often perceived as one and the same, the main interest pertaining to the entrepreneurial ecosystems is the number of new companies that are being created. It is therefore assumed that the creation of a large number of startups equals economic growth and prosperity. Isenberg argues though that the number of startups should not be the variable to determine economic growth (Isenberg 2016). He continues by proposing instead, that the essence of entrepreneurship is growth. The existence

² <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

³ https://www.cipe.org/legacy/publication-docs/CIPE_Report_Creating_the_Environment_for_Entrepreneurial_Success_1113.pdf

⁴ https://www.cipe.org/legacy/publication-docs/CIPE_Report_Creating_the_Environment_for_Entrepreneurial_Success_1113.pdf

⁵ <https://www.investopedia.com/terms/s/startup.asp>

or lack of it can be proven by sustainable, yet unusual growth, that comes to life in situations where businesses create unique value for customers and capture extraordinary economic value for themselves (Isenberg, 2013).

2.2. Entrepreneurship ecosystem

For decades researchers have tried to make sense out of the reasons, why certain locations flourish as entrepreneurial hubs and other simply lag behind. In order to better explain this phenomenon, a key concept that has emerged in describing the environment entrepreneurs and startups operate in, is the term entrepreneurship (in some literature also entrepreneurial) ecosystem. Daniel Isenberg (2014) has emphasized, that fostering entrepreneurship is a core component of economic development in all around the world. For that reason, he has called the creation of a favourable entrepreneurship ecosystem an economic development strategy.⁶ Spigel (2015) has pointed out that the concept's popularity is largely caused by the fact that it can be used as a tool to explain and analyze the thriving nature of high-growth entrepreneurship in certain geographical locations. The term was firstly used in the context of entrepreneurship by James Moore in 1993, when he presented the fact that businesses cannot simply evolve in a vacuum, but they rather respond to their respective environment.⁷ The concept did become more commonly used after the publishing of Daniel Isenberg's article "How to start an entrepreneurial revolution" in 2010 (Isenberg, 2010). Since then, entrepreneurship ecosystems have been widely researched and analyzed. The relevance and actuality of the theme is reflected by the various reports issued on the topic by for example the World Economic Forum (2014)⁸ and The Organization for Economic Co-Operation and Development (Mason and Brown 2014) along with a variety of respective conferences held. The Kauffmann foundation has begun a program to create a metrics system, in order to be able to measure the respective ecosystems.⁹ All of the aforementioned themes, will be further discussed in the following chapters in detail.

Although the concept is relatively novel and a clear consensus about the specifics of the term has not yet been achieved, some key aspects of it resonate with a majority of the experts in the field (Spigel, 2015). The use of the word "ecosystem" in relation to entrepreneurship, emerged

⁶ <https://hbr.org/2014/05/what-an-entrepreneurial-ecosystem-actually-is>

⁷ <https://hbr.org/1993/05/predators-and-prey-a-new-ecology-of-competition>

⁸ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

⁹ https://www.kauffman.org/-/media/kauffman_org/research-reports-and-covers/2015/03/measuring_an_entrepreneurial_ecosystem.pdf

due to the similarities to the ecosystems that are evident in nature. Thesaurus defines an ecosystem as: “*a system, or a group of interconnected elements, formed by the interaction of a community of organisms with their environment.*”¹⁰

Bearing in mind the aforementioned, the academics have applied the term into the context of entrepreneurship. Various authors have aimed to provide an exact definition. Spigel (2015:50) has noted the following, when describing the environment entrepreneurs operate in: “*Entrepreneurial ecosystems are combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures.*” Spigel’s definition highlights the fact, that the mere existence of the elements is not sufficient, but that there must be arranged in the right combination. Once these elements are in place, they should create the necessary supporting and encouraging environment, that allows the actors of the respective ecosystem to grow and take the necessary risks. Professor Colin Mason and Dr. Ross Brown (2014:5) have provided their version of the definition, by describing the entrepreneurship ecosystem as follows: “*A set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organisations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g. the business birth rate, numbers of high growth firms, levels of ‘blockbuster entrepreneurship’, number of serial entrepreneurs, degree of sell- out mentality within firms and levels of entrepreneurial ambition), which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment*”. This definition highlights the relevance of the interconnectedness of the ecosystem actors. As ecosystems are described as highly dynamic entities, the words collaboration and interconnectedness are particularly relevant. Malecki (2017) has added to it, that in his view the key characteristic of an entrepreneurship ecosystem is the fact that it is a system. He continues by elaborating that so far, the research on these ecosystems has been largely focused on its key drivers or ingredients, while not analyzing in depth how these drivers should be combined in order to create a sustainable and viable entrepreneurial environment. His approach highlights the relevance of not simply the mere existence of the key drivers in the ecosystem, but also how and in which ways these drivers are interconnected within the specific entrepreneurship ecosystem.

¹⁰ <http://www.dictionary.com/browse/ecosystem>

Isenberg (2016) outlines that the ecosystem metaphor does also indicate the existence of a self-organizing, self-sustaining and to some degree a self-regulating system, which consists of the various ecosystem actors pursuing their interests, with not a great deal of control over these processes from the outside. This further enforces the idea of the fact that such phenomena cannot merely be created, they must evolve into being and from there on it must manage it by itself. To further that argument Aleksi Aaltonen in his 2016 working paper “The Factors Shaping Entrepreneurial Ecosystems” suggests that due to the self-motivated nature of entrepreneurship, the successful entrepreneurship ecosystem should grow from the bottom up, meaning it all begins with the entrepreneur. He suggests that a certain degree of public intervention can be seen as supportive measures to create a favorable environment, but the direct interventions can only be of help, once all the other aspects supporting entrepreneurship have already been established. In addition to that, a report compiled by The Centre for International Private Enterprise (CIPE) on the subject of “*Creating the Environment for Entrepreneurial Success*”, draws attention to the crucial environmental dimension of entrepreneurship ecosystems. The report claims that the improvement of conditions and a leveled environment is not sufficient for entrepreneurship to flourish. A well-functioning ecosystem helps to broaden the pool of potential entrepreneurs, incentivizes entrepreneurs, eases the cost of doing business and creates an environment of healthy competition.¹¹

2.3. Actors of an entrepreneurship ecosystem

It can be derived from the previous subchapter that a number of elements must be in place in order for an entrepreneurship ecosystem to be able to emerge. The following subchapter will outline the active elements i.e. the actors of an entrepreneurship ecosystems that are considered necessary or of high importance. Aleksi Aaltonen (2016) has conducted a screening of more than 200 academic sources that explore the topic of entrepreneurship ecosystems and based on the review performed, he has identified the *five key actors* present in the respective ecosystems. For the purposes of this master thesis, the actors identified in Aaltonen’s review have been used as highly relevant data in order to build the theoretical framework of this dissertation and it has also significantly helped in making the determination as to how to best conduct the primary research.

¹¹ https://www.cipe.org/legacy/publication-docs/CIPE_Report_Creating_the_Environment_for_Entrepreneurial_Success_1113.pdf

The actors as per Aaltonen (2016) are as follows:

1. ***Entrepreneurs and potential entrepreneurs*** – the people who identify the opportunities that are present and build companies around them. The motivations of these people can range from the goal of achieving financial gain to establishing one's entrepreneurial self. These individuals generally have a strong motivation from within and a certain degree of confidence that enables them to seize the opportunities presented. Sources of potential startup entrepreneurs that possess the relevant skill set and capabilities are for example previous entrepreneurs, employees of large companies, university graduates and academics.
2. ***Private Investors*** – private investment funds and angel investors search for opportunities to invest in promising startups. These kinds of investors are generally good at mentoring startups due to their incentive structure and the fact that they have obtained significant experience from mentoring many startups previously. Local investors are of high importance for startups, as they often provide the initial seed funding for the founders and can assist in connecting the business to the global network of investors.
3. ***Large companies*** – although their role can at times be overlooked, large corporations do play a significant role in entrepreneurship ecosystems. These corporations shape the competitive environment and at times even compete directly with startups. Large corporations are present in the fields of funding ventures, spinning off new startups and the cultivation of new talent. These organizations are heavily involved in developing the ideas for potential technological futures and can also serve as exit opportunities for certain startups.
4. ***Universities*** – are considered as central figures of regional knowledge ecosystems. They are the ones providing the talent and inventions that can be put into commercial use through the means of entrepreneurship.
5. ***Policymakers and public bodies*** – these institutions have a variety of ways to drive entrepreneurship. They largely maintain the knowledge ecosystems, shape the regional dynamics and can assist in amplifying private investments by providing smart funding themselves. The role of policymakers can be considered crucial, as the level and quality of regulation plays a big part in enhancing or hindering entrepreneurship. Additionally, these institutions can favor entrepreneurship, by supporting technological trajectories that benefit startups rather than large companies.

The actors outlined above have been determined to be the central figures of entrepreneurship ecosystems and as such have been, for the purposes of this master thesis, approached to obtain an understanding of the inner workings of the ecosystems, to collect the relevant data and insights to be able to assess and analyze the respective ecosystems accordingly.

2.4. Key drivers of an entrepreneurship ecosystem

In this subchapter, the key drivers of entrepreneurship ecosystems based on the literature that has been reviewed will be presented. Although various academics and institutions have contributed significantly in determining the frameworks which enable for the key drivers of entrepreneurship ecosystems to be defined, for the purposes of this dissertation two specific cases have been applied. Firstly, the pillars of an entrepreneurship ecosystem as per the World Economic Forum report “Entrepreneurial Ecosystems Around the Globe and Early-Stage Company Growth dynamics” will be presented (2014).¹² This has been selected as a significant source of information due to the fact, that its findings are based on what entrepreneurs themselves deem to be as central pillars required for a favorable entrepreneurship ecosystem to emerge. Secondly, the domains of an entrepreneurship ecosystem as per professor Daniel Isenberg (2016), who is a prominent figure in the field of entrepreneurship ecosystems, will be laid out.

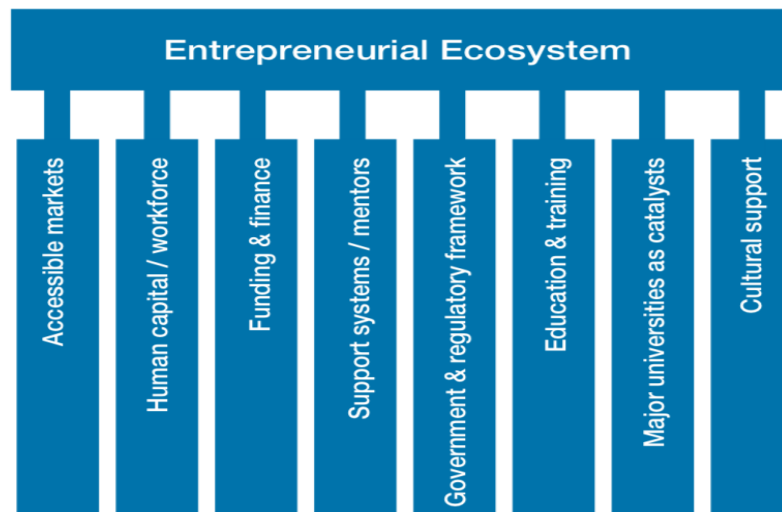
2.4.1. Pillars of an entrepreneurship ecosystem

As per the World Economic Forum 2014 report, although the entrepreneurial ecosystems across the world can differ significantly in their size and depth, they have concluded that the said ecosystems can be nevertheless overall characterized by eight pillars that are lay the foundation for the starting and scaling of early-stage companies. The pillars as per the findings have been outlined below.¹³

¹² <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

¹³ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

Figure 1 - The Eight Pillars of Entrepreneurial Ecosystems



Source: World Economic Forum (2014)

1. **Accessible Markets** – such markets, that have revenue-paying customers are of crucial importance for any for-profit company. In order for companies to be able to grow in a specific region, the availability of accessible markets is critical. This pillar's focus is therefore on the number and category of prospective customers and whether such customers are rather in the domestic or foreign market.
2. **Human capital/Workforce** – to what extent and how a startup is able to scale is enhanced by both the quality and quantity of the workforce that is available to them. Locations with a large number of potentially relevant employees create an environment where scaling becomes easier for early-stage companies.
3. **Funding and finance** – ventures that have significant financial reserves have the flexibility of obtaining a variety of the resources that are necessary for sustained growth. The availability of the required funding assists the companies in scaling more quickly and in an increasingly sustainable manner.
4. **Support systems/mentors** – the individuals and facilities that can help startups to acquire the right connections and scale the company.
5. **Government and regulatory framework** – the government policies and the respective regulatory framework of a location can either accelerate or inhibit the creation and growth of startups.

6. **Education and training** – Startups can benefit for the access to an educated labor force. A quality education promotes the need to have a capacity to learn, innovate and to appreciate the opportunities and challenges of the local market and the respective workplace.
7. **Major universities as catalysts** – large renowned universities can potentially play a significant role in the fostering of entrepreneurship in a region. For example, Stanford University and University of California, Berkley have been essential for the growth of entrepreneurship in Silicon Valley.
8. **Cultural support** – the level of cultural support in a region can have a major impact on the creation of an entrepreneurship ecosystem that is favorable for the startups.¹⁴

As per these findings, the entrepreneurs themselves find all the aforementioned pillars relevant, but would in their view particularly highlight the first three as the ones which are most critical for the scaling of their businesses. The following figure, **Figure 2**, demonstrates the specific components of the eight pillars of the entrepreneurship ecosystem.

Figure 2 - Components of the Entrepreneurial Ecosystem Pillars

<p>Accessible markets</p> <ul style="list-style-type: none"> - Domestic market: <ul style="list-style-type: none"> - Large companies as customers - Small/medium-sized companies as customers - Governments as customers - Foreign market: <ul style="list-style-type: none"> - Large companies as customers - Small/medium-sized companies as customers - Governments as customers 	<p>Human capital/workforce</p> <ul style="list-style-type: none"> - Management talent - Technical talent - Entrepreneurial company experience - Outsourcing availability - Access to immigrant workforce
<p>Funding & finance</p> <ul style="list-style-type: none"> - Friends and family - Angel investors - Private equity - Venture capital - Access to debt 	<p>Support systems/mentors</p> <ul style="list-style-type: none"> - Mentors/advisers - Professional services - Incubators/accelerators - Network of entrepreneurial peers
<p>Government & regulatory framework</p> <ul style="list-style-type: none"> - Ease of starting a business - Tax incentives - Business-friendly legislation/policies - Access to basic infrastructure - Access to telecommunications/broadband - Access to transport 	<p>Education & training</p> <ul style="list-style-type: none"> - Available workforce with pre-university education - Available workforce with university education - Entrepreneur-specific training
<p>Major universities as catalysts</p> <ul style="list-style-type: none"> - Promoting a culture of respect for entrepreneurship - Playing a key role in idea-formation for new companies - Playing a key role in providing graduates for new companies 	<p>Cultural support</p> <ul style="list-style-type: none"> - Tolerance of risk and failure - Preference for self-employment - Success stories/role models - Research culture - Positive image of entrepreneurship - Celebration of innovation

Source: World Economic Forum (2014)

¹⁴ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

The findings of the World Economic Forum (2014) report will be further looked into and analyzed in the empirical part of the master thesis, as the actors of the Portuguese and Estonian entrepreneurship ecosystems give their input to the respective framework and elaborate further on the theme of the key drivers of entrepreneurship ecosystems.¹⁵

2.4.2. Domains of the entrepreneurship ecosystem

Professor Daniel Isenberg has in his article “Introducing the Entrepreneurship Ecosystem: Four defining characteristics” outlined the six domains that the entrepreneurship ecosystems consist of and established the key characteristics these ecosystems. The four defining characteristics as per Isenberg (2011) are therefore as follows.¹⁶

1. *Ecosystems consist of six domains:*

- *a conducive culture*
- *enabling policies and leadership*
- *availability of appropriate finance*
- *quality human capital*
- *venture-friendly markets for products*
- *a range of institutional and infrastructural supplies*

2. *Each ecosystem is unique* - the entrepreneurship ecosystems do consist of the aforementioned six domains, but due to the complex elements that are interacting with each other in unique ways in different locations, each ecosystem has its own unique qualities.

3. *Specifying the generic root causes of the entrepreneurship ecosystem has limited practical value* - education, legislation, functional capital markets and other factors do have an impact on entrepreneurship ecosystems, however not in a significant manner and their effects can be seen only during a long period of time. The real changes are created by the variables of the ecosystems collaborating in novel and unique ways.

4. *Entrepreneurship ecosystems become self-sustaining* - once the six domains of the ecosystems have become sufficiently strong, they each reinforce one another. As a result, the need for involvement by the government is reduced. Therefore, it can be suggested that the

¹⁵ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

¹⁶ <https://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/#761a02c75fe8>

entrepreneurship programs created could potentially be self-liquidating over time in order to assist in the creation of sustainability in the ecosystem.

As was the case with the aforementioned pillars of entrepreneurship ecosystems, the importance of these characteristics and particularly the six domains proposed by Isenberg above, will be further explored and analyzed in the empirical part of the dissertation.¹⁷

2.5. Measuring entrepreneurship ecosystems

The literature review so far has focused on introducing the central themes related to entrepreneurship ecosystems. This subchapter will provide some insights into the literature that covers how such ecosystems can be measured.

Based on the literature reviewed, the experts have found it rather challenging to determine what kind of data to use and how exactly, to be able to measure or evaluate entrepreneurship ecosystems, as a result a clear consensus on how it should be done has not been reached so far. As a result, different organizations have created their own approaches and in certain cases, also systems of entrepreneurship ecosystem metrics. (Mason and Brown, 2014).

The Regional Entrepreneurship Accelerator Program (REAP) developed by the Massachusetts Institute of Technology (MIT) has created a tool to collect certain data, which allows the researchers to measure specific activity pillars and to identify potential bottlenecks, weaknesses and also the strengths of the ecosystem if needed. This assessment approach is focused on six topics within the ecosystem: the people, funding, infrastructure, policy, rewards, norms and demand. In addition to that, the networks that are in place between these elements are evaluated. (Mason and Brown, 2014)

The Kaufmann foundation (2015) has proposed their own metrics that focus on the overall performance of the ecosystem and have also highlighted the need to create comparisons between ecosystems that are similar in size and potentially also in terms of geographical location. Another aspect to consider here is that some views outline the fact that only qualitative research can reach the necessary depths to thoroughly be able to assess and analyze the complex social systems that entrepreneurship ecosystems in fact are (Malecki, 2017; Karatas-Ozkan et.

¹⁷ <https://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/#761a02c75fe8>

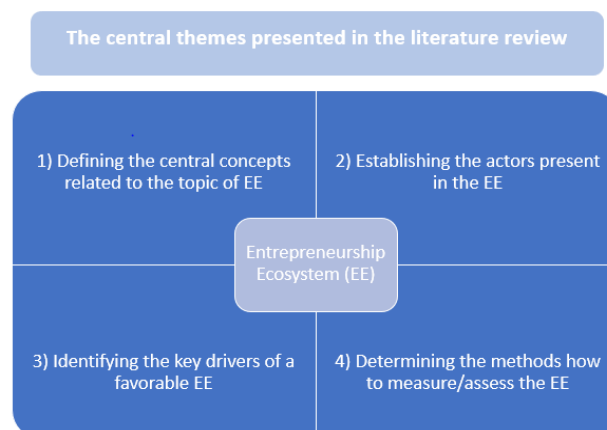
al. 2014). Malecki (2017) further adds that in his view the essence of it indeed is the dynamic processes and interconnectedness of the actors within the specific ecosystems.

After taking into account the above, it has been determined that for the purposes of this master thesis, the best approach to obtain the relevant insights regarding entrepreneurship ecosystems, the actors within the respective ecosystems have been approached and their perception of the concept, its key drivers and features obtained through means of conducting primary research in the form of interviews.

2.6. Summary of the literature review/conceptual reference framework

As a conclusion of the literature review, a schematized presentation of the main concepts presented in chapter two has been created. As it can be seen on **Figure 3**, firstly the central concepts relating to the topic of entrepreneurship ecosystems have been presented by answering the following questions: “What is entrepreneurship? Who is an entrepreneur? What is a startup? What is an entrepreneurship ecosystem?”. As the next step, the actors present in entrepreneurship ecosystems have been established. Following that, thirdly, the key drivers of a favorable entrepreneurship ecosystems have been identified. Lastly various approaches on how to measure/assess the quality of an entrepreneurship ecosystem are determined. The literature review has therefore been written with the aim to provide a solid foundation for the following chapters that will cover the empirics of the dissertation.

Figure 3 - *The central themes presented in the literature review*



Source: Author elaboration

3. METHODOLOGY AND RESEARCH DESIGN

3.1. Methodology

The previous chapter has outlined the theoretical framework and laid a foundation for the empirical part of the dissertation to be performed. This chapter has been dedicated to outlining the methodology applied in the writing of the master thesis. In the following paragraphs the types of research used, the means of data collection and selection, the methods of analysis and the rationale behind choosing these specific approaches will be elaborated on.

Methodology can be described as the concept used to refer to the research design, methods, approaches and procedures that have been used in research that is meticulously planned to find out something specific (Keeves, 1997). Therefore, to ensure that the research performed has the necessary reliability and validity the appropriate methodology is to be chosen.¹⁸

3.2. The research objectives and research questions

The aim of the research part of the master thesis is to obtain an understanding as to what are entrepreneurship ecosystems and why are they relevant in today's world. In order to set the focus for the empirical part of the dissertation, the following research objectives have been set:

- *Identify what constitutes as a favorable entrepreneurship ecosystem;*
- *Determine how such ecosystems come into being;*
- *Describe and analyze how entrepreneurship ecosystems are perceived by the actors operating in them.*

After the objectives had been established, the relevant research paradigm was to be determined. A research paradigm can be defined as a set of basic beliefs that defines a worldview that guides the research activity or investigation (Guba and Lincoln, 1994). As it can be derived from the data provided in the literature review regarding how ecosystems can be measured and as per the objectives laid out before, it has been determined that it would be optimal to apply the *interpretive research paradigm* as the guiding approach. The respective approach allows the person performing the research to witness the world through the perceptions and experiences of the research participants (Nguyen, 2015).

¹⁸ <https://research-methodology.net/research-methodology/reliability-validity-and-repeatability/>

As the next step, in order to be able to narrow down the focus and perform a detailed analysis of the topic, specific research questions have been developed from the objectives set. The process of establishing the research questions can be considered vital for performing the research, as they serve as a guide in the choice of methodology, sample, data collection instruments and data analysis techniques (Lipowski, 2008). The research questions posed are as follows:

1. *What are the key drivers of a favorable entrepreneurship ecosystem?*
2. *How have Portugal and Estonia fared with regards to these drivers?*
3. *What has caused these two countries to emerge as startup hubs?*

3.3. Data collection methods

In order to be able to fulfill the objectives set and answer the respective research questions both *primary* and *secondary data* have been collected and duly analyzed.

In collecting the *primary data*, *qualitative methods* have been used. As per the definition, qualitative research focuses on studying things in their natural settings and interpreting the specific phenomena with relation to what meanings it brings to the research participants (Denzin and Lincoln, 2000), this has been determined to be the most suitable framework to study and then analyze the concepts pertaining to entrepreneurship ecosystems. The specific qualitative method used in this case is conducting *semi-structured interviews*. As per Bradford & Cullen (2012), these types of interviews are some of the most widely used methods of data collection in the world of social sciences. Their distinct value is that they allow for the researcher to examine subjective viewpoints and to obtain in-depth accounts of the interviewees' experiences (Flick, 2009). In this dissertation the semi-structured interviews have been conducted with the actors of the entrepreneurship ecosystems in both Portugal and Estonia in order to be able to draw data directly from the participants operating in the specific phenomena on a daily basis.

In order to complement the primary data obtained, some degree of *secondary data* has been used in the process of conducting the analysis. The author has researched and analyzed data from various different articles, studies and reports pertaining to the concept of entrepreneurship ecosystem and more specifically to the respective ecosystems in both Portugal and Estonia.

3.4. Interview participants

As outlined in the previous subchapter, the primary research performed was in the form of conducting semi-structured interviews. In the literature review, Aaltonen (2016) has established the five types of actors present in entrepreneurship ecosystems. Therefore, in order to obtain an in-depth understanding about the entrepreneurship ecosystems from within, it was determined that those actors are to be interviewed. Due to the fact that both Portugal and Estonia have in recent years emerged as startup hotspots and as access to the key actors in both countries was readily available for the author, these two countries were selected into the scope of the research. In total, answers were received from nineteen respondents, one respondent, Arho Anttila from Pipedrive was interviewed both in the light of the Portuguese and Estonian entrepreneurship ecosystems, as the company operates in both locations. The goal when mapping who to interview was to have as broad spectrum of the various actors within the ecosystems as possible. Largely that goal was achieved, one limitation to be outlined here is that contact with public authorities/policy-makers was largely not obtained due to lack of access. The author found it crucial to also have the input from both Startup Portugal and Startup Estonia. The head of Startup Estonia was readily available, however the arrangements with Startup Portugal were repeatedly cancelled, and thus their input was not received.

The interviews took place between October 2017 and February 2018. The initial contact was made with most respondents via e-mail and once they agreed to take part in the interviews, the respective questions were sent to them. Some interviews were conducted in person and some via Skype, depending on the location and the availability of the respondents. Three respondents opted to answer the questions in written form via email. The interviews were conducted in a semi-structured format, the respective interview questions have been added to **Annex 1** and **Annex 2** of the master thesis. The interviews that were conducted either in person or via Skype were recorded and then transcribed. **Table 1** and **Table 2** presented in the following pages outline the full list of interview respondents, their role in the respective ecosystems, their credentials, name, time of the interview/answers were received, the format of the response received and a code name for the specific interviewee that will be used going forward in the research findings chapter.

Table 1 -The list of interviewees from Portugal

Portugal						
	<i>Type of Actor</i>	<i>Title</i>	<i>Name</i>	<i>Date</i>	<i>Interview type</i>	<i>Code name</i>
1	Entrepreneur/ startup	Co-founder at Altar.io	Daniel de Castro Ruivo	18.12.2017	In person	EP1
2	Entrepreneur/ startup	Director of Business Development & Strategic Partnerships at Pipedrive Inc.	Arho Anttila	10.01.2018	Via email	EP2
3	Investor/ business angel	Business angel at Red Angels	Johan Pardoel	30.01.2018	Via email	IP1
4	Investor	Director of Portfolio Development at Portugal Ventures	Heitor Benfeito	12.10.2017	Via Skype	IP2
5	Investor	Investment Analyst at LC Ventures	Luca Mazzei	14.02.2018	Via Skype	IP3
6	Large company	Investment Analyst at EDP Ventures	Antonio Lopes	21.12.2017	Via Skype	CP1
7	Large company	Innovation Specialist at Sonae	Ana Machado Silva	03.01.2018	Via Skype	CP2
8	Large company/ incubator	Community Manager at Vodafone Powelab	João Tenente	15.12.2017	In person	CP3
9	Public Authority/ incubator	Community Manager at Startup Lisboa	Bruno Gomes	22.01.2018	Via Skype	PP1
10	University	Assistant professor ISCTE - Instituto Universitário de Lisboa	Gonçalo José Torres Pernas	12.12.2017	In person	UP1

Source: Author elaboration

Table 2 - The list of interviewees from Estonia

Estonia						
	<i>Type of Actor</i>	<i>Title</i>	<i>Name</i>	<i>Date</i>	<i>Interview type</i>	<i>Code name</i>
1	Entrepreneur/ startup	Founder & CEO at Veriff	Kaarel Kotkas	01.02.2018	Via Skype	EE1
2	Entrepreneur/ startup	Director of Business Development & Strategic Partnerships at Pipedrive	Arho Anttila	10.01.2018	Via email	EP2
3	Entrepreneur/ mentor	Digital Innovation Consultant at Proud Engineers	Calum Cameron	13.10.2017	Via Skype	EE2
4	Entrepreneur/ business angel	Managing partner at Superangel/ Founder at Fortumo	Rain Rannu	23.01.2018	Via Skype	EE3
5	Investor	Growth Fund Partner at Baltcap	Heidi Kakko	16.12.2017	Via email	IE1
6	Investor	Associate at Karma VC	Marili Merendi	06.10.2017	Via Skype	IE2
7	Large company	Head of LHV UK	Andres Kitter	03.01.2018	In person	CE1
8	Large company/ incubator	Partnerships at Telia Vunk; Program Manager at Telia Vunk	Andres Peets, Maarit Cimolonskas	15.12.2017	In person	CE2
9	Public Authority	Head of Startup Estonia/ Board Member at Smartcap	Mari Vavulski	18.10.2017	Via Skype	PE1
10	University/ incubator	Startup Hub Manager at TTÜ Mektory	Katre Purga	15.01.2018	In person	UE1

Source: Author elaboration

3.5. Interview structure

Once it was determined that the main source of primary data obtained for the purposes of writing this dissertation would be the interviews conducted with the actors within the specific entrepreneurship ecosystems of Portugal and Estonia, the structure of the interview was carefully drafted. On a broad scale, the interview questions can be divided into two categories: *1) the questions regarding entrepreneurship ecosystems as a whole; 2) location specific questions regarding the ecosystem the interviewed actor operates in.* The complete list of interview questions has been outlined in **Annex 1** and **Annex 2** of the dissertation.

Starting from the first category, the questions one and two of the interview, served as somewhat of an introduction into the topic and to obtain an understanding how the interviewee defines the concept of the ecosystem in their own words and whether they find the existence of a favorable entrepreneurship ecosystem of any relevance for their activities. Already at the initial phases of mapping out the themes that are to be covered in the dissertation, finding out the key drivers of a favorable entrepreneurship ecosystem were found of crucial importance and as such this has also been set as the first research question that is to be answered. Therefore, question three was designed to find out from the respondents what they perceive to be as the key drivers of a favorable entrepreneurship ecosystem. The following questions four and five were posed in order to find out from the respondents how relevant and true they find the theoretical concepts derived from the literature review to be in practice, hence the interviewees were asked to provide their insights and feedback to the actors of an ecosystem as per Aaltonen's (2016) definition, the entrepreneurship ecosystem pillars as per the World Economic Forum report (2014)¹⁹ and the ecosystem domains as per Daniel Isenberg (2011).²⁰ Questions six to eight focused on how the respondents perceive the interactions within the relevant ecosystems, how the entrepreneurship ecosystems come into being, and, how they can be managed if at all so. The basis for the relevance of these questions can also be drawn from the themes covered in the literature review, in relation to the characteristics of the entrepreneurship ecosystems.

¹⁹ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

²⁰ <https://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/#761a02c75fe8>

Moving on to category two, from question nine onwards, the interview focused on the location specific aspects of the entrepreneurship ecosystems. Questions nine to twelve enquired from the respondents firstly how they would rate the ecosystems they are operating in and what they see as the local ecosystem's strengths, weaknesses and its uniqueness. Additionally, the interviewees were asked to provide feedback on what kind of improvements could be made within the ecosystem and who should be responsible for such changes to be made. Lastly questions thirteen to fifteen cover the spillover that may have occurred within the ecosystem, the insight from the respondents regarding the attractiveness of the local ecosystem in terms of investments and finally as a closing theme, whether or not advancing the local entrepreneurship ecosystem could be considered as an economic development strategy.

3.6. Data analysis process

After the completion of the interviewing process the analysis of the data begun. For the purposes of the dissertation *qualitative content analysis* was performed in order to interpret the responses received from the interviewees. It is a rather commonly used research technique that is applied in order to interpret meaning from the contents of the data gathered (Hsieh, Shannon 2005). To explore and be able to analyze the theme of entrepreneurship ecosystem, the approach applied is the *directed content analysis*. This approach is frequently used to validate or extend the theoretical framework of a concept, hence it starts with outlining the theoretical framework of a phenomena (Hsieh, Shannon 2005), as it was done in the case of this dissertation. Based on the key concepts presented in the literature review, certain codes for the data analysis were already defined, as it is common in the case of directed content analysis (Hsieh, Shannon 2005). Mayring (2000) has characterized this particular approach as the application of a *deductive category*. Once the data collection was complete, additional codes were applied based on the research findings obtained.

The coding process in research is generally applied in order to structure the large quantities of data obtained into smaller content categories (Weber, 1990). These categories can be defined as themes that are expressed in the data or can be concluded from the text through the analysis performed, after that has been completed, the specific patterns and relationships of the categories are determined (Hsieh, Shannon 2005). The following paragraphs will now outline the specific steps taken in the data analysis process when writing this dissertation.

Process description

→ As it is common for the directed content analysis, some of the codes for the analysis were already established in the process of compiling the literature review, hence the **first codes and categories were deductively outlined based on the theoretical framework presented**;

→ For the purposes of the analysis of this dissertation, **a sentence as established as a coding unit**.

→ After the interviewing process was completed and all the necessary data gathered, the **interviews were transcribed**. The interviews held in Estonian were duly translated into English.

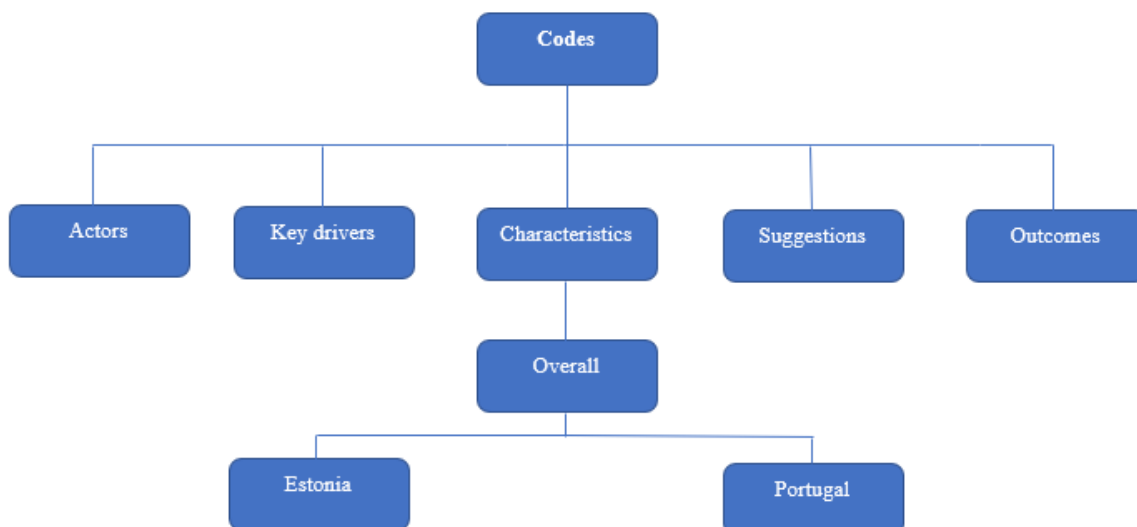
→ As a next step, **the established codes were reviewed** in the light of the complete data set (literature review and the primary data obtained based on the interviews);

→ Once the codes and categories were finalized, the **key categories, themes and the relationships among them were identified**;

→ Finally, based on the predetermined themes and categories the **relevant conclusions were drawn** accordingly.

Figure 4 demonstrates the themes that were established based on the coding and categorization of the primary data received.

Figure 4 - The themes established based on coding and categorization



Source: Author elaboration

4. RESEARCH FINDINGS

4.1. Defining the concept of entrepreneurship ecosystem

Before analyzing any theme, it is of the utmost importance to obtain an understanding of the specific concept in its entirety. Therefore, this subchapter will present the findings related to the concept of entrepreneurship ecosystem based on the views and experiences of the actors operating within the respective local ecosystems. Firstly, the insights of the actors as to how they understand and would define the term entrepreneurship ecosystems and its importance will be outlined in subchapters 4.1.1 and 4.1.2. Secondly, in subchapter 4.1.3., the findings as to who in fact are the key actors within an entrepreneurship ecosystem in their view will be presented and any additions to the approaches presented in the literature review will be highlighted.

4.1.1. Understanding the term

The first question posed to the actors of the entrepreneurship ecosystems in Portugal and Estonia was about how they understand the concept of entrepreneurship ecosystem. Prior to delving into the specifics of the local ecosystems, the author of the dissertation found it particularly relevant to obtain insights into what kind of a meaning the interviewees themselves omit to the ecosystems they as actors are operating in.

The key terms that most interviewees highlighted in their responses were *community*, *interconnectedness*, the *actors themselves* and a set of *supportive measures, facilities and infrastructure*. The respondent from ISCTE university defined the entrepreneurship ecosystem as follows “*The whole set of variables that have been created to support the entrepreneurship ecosystem. This includes the financial instruments, incubation, the mentorship support and the facilitation process to foster entrepreneurship in a specific location.*” (UP1). One of the founders in Portugal s pointed out that in his view, it is certainly important to have certain tools available for startups in order to start, however, the most important aspect is still the *interactions* and *synergies* that are created among the actors of the ecosystem, which then create the community (EP1). The Sonae representative added that a favorable ecosystem requires *connectedness* and *interdependence* in a good way, hence collaboration is necessary for the different elements of the ecosystem to properly function (CP2). An investor from Estonia added that an *open dialogue* in the society is certainly a requirement for a favorable ecosystem and that the state support to it should not be neglected either (IE2). The Startup

4.1.3 The importance of entrepreneurship ecosystems

As a follow-up to defining the concept, the interviewees were asked whether in their view a good ecosystem is in fact of any relevance or not. The respondents *unanimously agreed that the existence of a favorable and supportive entrepreneurship ecosystem is important for startups to be built and also for all the relevant actors present in the ecosystems*. One of the Estonian investors pointed out that the favorable entrepreneurship ecosystem produces a *forward-thinking culture*, which allows for the talent existent in the ecosystem to achieve self-actualization and fast-forwards the accumulation of various different skill sets (IE2). The Vodafone Powerlab representative regarded the favorable ecosystem a key success factor for startups and SMEs (CP3). To which the respondent from Startup Estonia added that the support from the community is of central importance for entrepreneurs in succeeding in their undertakings (PE1). One of the startup founders from Portugal further elaborated that a *structured entrepreneurship ecosystem helps entrepreneurs that have good products succeed*. He also pointed out that from his perspective, having the access to *structured mentorship* is something of particular value and would say that it is something that is currently most needed in the Portuguese ecosystems (EP1). The Sonae representative further elaborated that a good entrepreneurship ecosystem *drives innovation and value generation*. She continued by saying that the ideas and concepts in such an environment then come into life in a much more agile and rapid way, which then also helps to *bridge the gap between the research and development activities and the actual market* (CP2).

4.1.4. Actors

The concept of the most relevant actors of entrepreneurship ecosystems has been at the core of creating the structure and frameworks for this dissertation. The actors as per Aleksii Aaltonen's (2016) definition have been taken as the central figures operating in entrepreneurship ecosystems. As such, the key actors present in the entrepreneurship ecosystems of Estonia and Portugal have been interviewed in order to leverage off their expertise and obtain the relevant insights of the working of the respective ecosystems.

Question number four of the interviews was covering the theme of actors. The interviewer presented the five actors as per Aaltonen (2016) to the respondents and enquired whether or not the respondent agrees with the setup, finds them all relevant or would have something significant added or something altogether removed.

- **Entrepreneurs**

A vast majority of the interviewees largely agreed with the setup proposed by Aaltonen (2016). The respondents did in many cases highlight the importance of setting the focus and hence defined as the so to say *central figure in the ecosystem* the entrepreneurs. One of the investors from Estonia for instance has stated that: “*Entrepreneurs play the first violin here, as they are the ones who first come up with the idea, gather the team around them and then navigate through the constantly changing business environment, while at the same time also bearing the risks associated with failure as usually a lot of money and time is invested during the process of starting a business.*”(IE2). Another investor/business angel has added that the overall attitude of the ecosystem and the actions driving it should set the entrepreneur to a central position (IE1). Several of the respondents from Estonia also highlighted the essential element of having the *necessary talent pool* present in the ecosystem for entrepreneurs to emerge (EE3, EE2, CE1).

- **Investors**

Most of the respondents also agreed that it is *important to have investors present in a well-functioning entrepreneurship ecosystem*. As per the founder and serial entrepreneur from Portugal, the investors are the second most important type of actors in an entrepreneurship ecosystem (EP1). Out of all the interviewees only one, entrepreneur/mentor from Estonia, stated that investors should be removed from the list of relevant actors as he deems that is much more important for a startup to have customers than investors around (EE2). One of the representatives from the Estonian investor community stated that especially in the case of early stage startups the financing from investors is of the utmost importance (IE2). The respondent from Vodafone Powerlab added that, in order for startups to be able to significantly grow, investors are undeniably necessary (CP3). The Portugal Ventures representative highlighted that in order to *enhance the international outlook* of the respective ecosystem, the addition of investors that are big international players could be extremely beneficial (IP2). The professor from ISCTE in Portugal in turn was certain that in addition to the large international investors, the local business angels can give a significant impact on the ecosystem on a local level (UP1).

- **Large companies**

The next set of actors as per Aaltonen (2016) was large companies. Here once again, it appears that the academic conclusions match the reality, all the respondents to a certain degree agreed

that **large companies do have a significant role to be played in entrepreneurship ecosystems**. As per the representative of Startup Lisboa and the investor from Karma VC, they agreed that the role of large companies has started to change in terms of entrepreneurship ecosystems, as in the past they saw startups as competitors and some degree as threat, then nowadays they are increasingly starting to **collaborate in various forms** (PP1, IE2). The Estonian investor continued by stating that due to the fact that the large companies tend to have deep pockets they can attract the best talent and as they have created large interconnected systems by themselves they can easily **test the new solutions that startups are providing**, hence the collaboration between startups and large companies can potentially be highly beneficial for both parties (IE2). The Startup Estonia respondent did emphasize also the fact that the large companies could become an **income stream for the startups**, by becoming clients of the startups, which enables them to then receive a steady cash flow and the opportunity to test their product. In order to further raise the awareness of the benefits of collaborations between large companies and startups, Startup Estonia has launched a specific program, which has the goal to demonstrate to large and traditional companies what kind of opportunities can be seized by working together with startups and how to apply open innovation in a real-life scenario (PE1). The respondent from Sonae, a large company itself, did however point out that in her view, **small and medium sized companies should be added here too**, as in their collaboration with startups exciting new synergies can be created. She continued, by saying, that any company with the relevant market knowledge that has a vision about the field can add value to the ecosystem, even if they do not become a potential client or a corporate investor to the specific startup (CP2). One of the large company representatives from Estonia seconded that, stating that the size of the company is not of the essence, but rather the contribution they can make to the ecosystem (CE1). The Startup Estonia representative and a founder from Estonia both did point out that in Estonia there are no truly large companies or branches of giants such as Google or Facebook and that is certainly something that is missing from the local ecosystem for it to have really all the truly beneficial actors present and active in the local community (PE1, EE3).

- **Universities**

Universities were regarded to be **somewhat important by a large part of the respondents**. The Sonae representative highlighted the importance of universities as technology transfer units (CP2). An investor from Estonia agreed that they are particularly relevant in the subjects that **produce technical and engineering talent** and one of the investors/business angels added that

their input in terms of *research and intellectual property* is of high value (IE2, IE1). The disagreement with having universities as one of the main players in the ecosystem came largely from founders themselves. The founder from Portugal pointed out that he does not understand at all the need to have them included as the key actors and another founder from Estonia adds that he has yet to see a startup of any significant value come out of any Estonian university (EP1, EE3). One of the Estonian founder/mentors, the Startup Estonia representative and the representative of TalTech Mektory all emphasize that the importance of the education institutions should come into play much earlier, namely *the cultivation of an entrepreneurial mindset and encouragement of a risk-taking attitude should already start in schools*, even in elementary schools, as already the time there, is crucial for an individual's development and openness to engage in entrepreneurial activities (EE2, PE1, UE1).

- *Public authorities, policy-makers*

As with the previous actors outlined by Aaltonen (2016), also with public authorities, a large number of respondents agreed that they are certainly the type of actor that can influence the creation of a favourable entrepreneurship ecosystem, although several interviewees did state that their main role should be *not to interfere or build obstacles for entrepreneurs operating in the local ecosystem*. The interviewees in many cases pointed out that the role of public authorities is *most relevant in terms of legislation*. One of the Estonian investors pointed out that it is up to the public authorities to *keep the levels of bureaucracy to a minimum, the tax system should be simple and transparent and the immigration policies flexible* (IE2). Investor from EstBan and the representative from Startup Portugal emphasized the importance of *stable and supportive tax and corporate laws* (IE1, PP1). The Estonian investor added that the legislation should also include *supportive measures for innovation* (IE1). One of the Estonian founders brought out the good examples of supportive legislative measures from the Estonian ecosystem such as the *e-residency program* that has been established and also the creation of a specific *startup visa* (EE3). The Portuguese founder did state that he understands the importance of the creation of a legislative environment that supports entrepreneurship, but would certainly not regard public authorities as such, as key players in terms of the ecosystem (EP1).

- ***Additions to Aaltonen's (2016) framework***

As it can be seen from the information presented above, the respondents that were interviewed for this dissertation largely agreed with the findings of Aaltonen (2016). Many of the respondents did however emphasize that it would be important to include ***incubators and accelerators*** into this framework. A founder from Portugal has named incubators/accelerators as the third most important player after entrepreneurs themselves and the investors (EP1). The representative from Portugal Ventures pointed out that the incubation gives the startup the very first experience in the industry they are starting to operate in (IP2). One of the Estonian investors points out that although they might be able to give the startups some needed experience, today taking part of an incubation or acceleration process is certainly not a requirement for success for startups (IE2). One of the representatives from Telia's accelerator Vunk, did however state that he would only add accelerators only, as he deems these to be of central importance in the process of building a startup (CE2). Taking a step further from directly incubation/acceleration, many respondents, particularly entrepreneurs/founders themselves did highlight the importance of having the opportunity to have access to relevant ***mentorship***. One of the investors from Portugal has pointed out that ***experienced entrepreneurs are some of the key figures who can provide mentorship for startups*** (IP2). One of the founders has added that sometimes a one-hour conversation with the right mentor can save an entrepreneur one year of work – this is how crucial he deems quality mentorship to be (EP1). An investor and business angel added that mentorship from serial entrepreneurs and support from certain “door-openers” are relevant as a part of the overall support the startup community can provide to the entrepreneurs (IE1).

Founders themselves also in several cases mentioned that ***customers*** are to be added to the list of central actors, as this is who the startups essentially are offering their products to. Without them there would be no entrepreneurship and therefore also no ecosystem.

Several of the respondents also pointed out that ***non-governmental organisations*** (NGOs) would be necessary to be included as key support figures. One of the representatives of an Estonian large company states that NGOs are very relevant for the ecosystem, pointing out initiatives as “Let's clean the world”, therefore such NGOs that are public, but not in the government sector certainly enhance the entrepreneurship ecosystem (CE1). As per Telia Vunk accelerator's representative, Garage48, an NGO organizing hackatons and having a mission to bring the Silicon Valley mindset to Estonia would be a great example of it (CE2).

The Pipedrive representative and one of the investors from Estonia have additionally both outlined the importance of *service providers* who support the ecosystem such as consultants, office space providers, legal advisors and other supporting infrastructure measures (EP2, IE1).

Lastly, a rather interesting addition that was added by two respondents, the Pipedrive representative and Red Angels representative was to add the *media* related to startup entrepreneurship into the list of actors of high importance (EP2, IP1).

Based on the above, the research findings largely confirm the basis of Aaltonen's review and as such it can be deemed that the academic findings do match the reality based on the interviews conducted for the purposes of this master thesis.

4.2. Drivers of the entrepreneurship ecosystems and the interactions within

From the very first stages of mapping the action plan for the writing of this master thesis, it was determined that the key drivers of a favorable entrepreneurship ecosystems should be at the heart of this dissertation. By establishing what the forces that drive the success and favorability of these ecosystems are and analyzing them in the two specific cases chosen into the scope of this thesis, the aim was to identify a pattern and therefore as a result to potentially enhance the already existing frameworks in the field of entrepreneurship ecosystems.

When conducting the interviews, the respondents were firstly asked how they would define the concept of entrepreneurship ecosystem, what its importance in their view is and what they see as the key drivers of favorable entrepreneurship ecosystems. After these answers were received, the respondents were presented with the key drivers identified based on the literature that had been reviewed and as such the interviewees were asked to opine on the pillars outlined by the World Economic Forum report from 2014²¹ and Daniel Isenberg's six domains of an entrepreneurship ecosystem.²²

²¹ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

²² <https://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/#761a02c75fe8>

4.2.1. Key drivers as perceived by the actors of the entrepreneurship ecosystems

One of the founders from Estonia sees two key drivers of an entrepreneurship ecosystem, firstly the *strong initiative taken by the actors* of the ecosystem and secondly *time*. He concludes that no massively successful ecosystem has been built overnight (EE1). One of the startup entrepreneurs from Portugal continues by stating that he sees the key drivers of entrepreneurship ecosystems the tools that are available in the local environment. By the tools, he means the *incentives to take on entrepreneurship, the availability of quality mentorship and support, good incubation and acceleration opportunities*. He does note that one of the biggest gaps in Portugal is the lack of structured mentorship and the fact that the governmental incentives available benefit more the larger incumbent companies than real startups due to the key performance indicator demands that are set (EP1).

A representative of one of the large companies in Portugal, agreed that the *right mindset and certain elements of the ecosystem* drive the success of the specific entrepreneurship ecosystem. She pointed out the relevance of an *open-minded and collaborative approach*, particularly in the cooperation between startups and large corporations (CP2). The Vodafone Powerlab representative also confirmed that in his perspective the *entrepreneurship-focused mindset* and an openness from all the actors are the driving forces of the ecosystem (CP3). One of the Portuguese investors wholeheartedly agreed that this is where it all begins – with the right mindset and attitude (IP2). The Startup Estonia representative further elaborated that the *level of engagement from the startups participating in the same community is essential*. This once again relies largely on the open-mindedness and the willingness to collaborate. In addition to that the collaboration between the already incumbent various organizations that are active in the market is of key importance, this collaboration should then result in not seeing each other so much as competitors, but rather counterparties who enhance each other's activities whenever possible. Lastly, she added that the openness and collaborative approach should also come from the side of the government. *The government should have the willingness to listen to the different actors within the ecosystem when they highlight what is no longer working for the new business models and also to have the readiness and flexibility to make change happen as soon as possible*. If bottlenecks do appear and they are not removed in a timely and efficient manner, it would be ignorant to expect that the ecosystem improves on its own (PE1).

The Sonae representative added also that *the availability of the relevant funding, support structures, legal and business frameworks are crucially important*. As many others, she also

noted the relevance of *certain connectors within the ecosystem, who are people or organizations, who bring together the various actors of the ecosystem on platforms, events* etc. Lastly a valuable piece of information provided by the Sonae representative was the fact that a strong ecosystem must also be able to *provide the startups with test pads that allow them to test their ideas in real life context* (CP2). These opportunities to test the ideas could be provided by the large companies or why not perhaps also by the government/public authorities (CP2, EE2).

One of the investors from Portugal highlighted the following aspects as the key drivers of a favorable entrepreneurship ecosystem:

- *“The regulations to promote an uncomplicated manner of establishing a company and doing business and subsidies and/or tax advantages for “risk capital” investments;*
- *Universities and also schools, that promote an entrepreneurial spirit and participate in international exchange programs related to new businesses and entrepreneurship;*
- *A critical mass (number of startups, incubators, facilities) and international connections and cooperation to attract sufficient interest from investors and (potential) entrepreneurs;*
- *Quality infrastructure to cater for the digital nomads. The elements of the respective infrastructure are for example incubators, fast and free telco networks/Wifi and co-working spaces;*
- *An active community, communication/publicity/events that promote the city/country as a hub for entrepreneurs as we all as a dynamic agenda with exciting startup challenges”* (IP1).

The Portugal Ventures representative did also emphasize the relevance of *healthy competition*, the *availability of entrepreneurial talent, quality education and access to the necessary funding* in a favorable entrepreneurship ecosystem (IP2).

The respondent from Pipedrive did state that in his view, a *critical mass of like-minded people with the relevant talent and the right companies* are certainly of central importance for the health of an entrepreneurship ecosystem. Additionally, he did also say that *success stories can have a strong impact* on the overall ecosystem and really drive its progress (EP2). One of the Estonian startup entrepreneurs wholeheartedly agreed, that the *good role models* that have

emerged from the same ecosystem can be considered drivers of the progress of the respective ecosystem (EE1).

The representative of one of the startups, as several others, did also stress the *importance of access to the required capital* and interestingly also the *general level of the English language skills in a specific location* (EP2).

The two investors from Estonia both identified the key drivers as in fact the *actors themselves* and were also both emphasizing that the central actor at the *heart of any ecosystem should always be the entrepreneur* (IE1, IE2). As per one of them more specifically the key drivers are as follows (IE1):

- *Customers/clients*
- *Employees/human resource (access to talent, ease of recruiting, from a legal perspective the freedom of labour movement)*
- *Research/IPR (universities, research & development)*
- *Community support (mentors, serial entrepreneurs, door-openers)*
- *Funding sources and investor protection (including the legal environment)*
- *Innovation (supportive measures and active development, mindset)*
- *Public support organizations*
- *Service providers*
- *Policy measures (stable and supportive tax laws, reporting, corporate governance) etc.*

One of the respondents from an Estonian large company sees in the case of Estonia and in some others *chance as the driver* of the ecosystem that has emerged. That being said, he of course fully agrees that *high-quality universities, the relevant talent pool and the availability of the financing measures are truly critical*. He does add to it that the *economic and legal environment has to be suitable* for venture capitalists or any types of investors, because otherwise they are less inclined to make the needed investments into startups operating in specific entrepreneurship ecosystems. To conclude his point, he says that certain prerequisites

that can be created plus chance drive the emergence of a favorable entrepreneurship ecosystem (CE1).

4.2.2. Drivers as per the literature review

- *Pillars as per the report of World Economic Forum (2014)*²³

All the interviewees agreed that these pillars are relevant and actual in entrepreneurship ecosystems. The prioritization of specific pillars did vary from one respondent to another and some even categorized the pillars as pillars of key importance and then some as secondary ones. There is a consensus however that the results presented in the WEF 2014 report are *successfully portraying the practical elements that are deemed to be of central importance by the actors operating in the ecosystems*.

One of the Portuguese founders believes that the pillars outlined by the report reflects the truly relevant aspects of entrepreneurship ecosystems. He agrees with their proposed framework and highlights that the accessible markets, quality human capital and the right support systems are fundamental for entrepreneurs (EP1). One of the Estonian respondents, based on her previous experience as an entrepreneur, wholeheartedly agrees that these three are the key aspects that are of the essence for startup founders (CE2).

The Sonae representative confirmed that in her view all the major aspects that are relevant are covered by the report. She did add that it is important to emphasize the role of the supporting infrastructure. The order of priority in her view would largely depend on the specific company and their business focus (CP2). A representative of one of the Estonian large companies agrees with that and adds that for instance for a biomedical startup the role of universities is much more significant than the role of mentors for instance, at least in the initial phases of the startup (CE1).

As per one of the investors from Portugal, all the pillars are highly important and if any of them would be removed, in his view a favorable ecosystem cannot come into being. He also does

²³ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

mention that the pillars are to be continuously fostered as an ecosystem is a breathing and moving organism and as such the dynamics within the ecosystem and the role of the pillars can therefore in time change (IP2).

The professor from ISCTE fully agrees with the WEF (2014)²⁴ findings, but does point out, that the pillars must be created in a manner, which enables them to be easily be adapted to the local settings and the local ecosystem. He adds that in his view currently in Portugal the highest priority pillar should be the funding and finance one (UP1).

The Pipedrive representative has divided the pillars into two categories, firstly the key components and then the secondary components. From the point of view of an entrepreneur, he would define the key components as the quality human capital/workforce, accessible markets, funding/finance and support systems/mentors. In his view, the other four pillars are secondary for the startups (EP2). One of the investors has seconded that view, stating that in her perspective this categorization rings most true in the light of her experience in the industry. She does add that the key aspects in the ecosystem should always be the people, the idea and the capital (IE2). Lastly, one of the Estonian investors agrees with the setup. In terms of the order of importance, in her view the role of major universities as catalysts could be ranked significantly higher, as the research & development activities by major universities can contribute a great deal into innovation (IE1).

- ***Domains as per Daniel Isenberg²⁵***

One of the Portuguese startup entrepreneurs points out that in his view ***the Isenberg approach is more theoretical and academic than the WEF 2014 approach*** (EP1).

A founder/mentor from the Estonian ecosystem thoroughly agrees with the domains proposed by Isenberg (2011), particularly he highlights the conducive culture aspect, as in his view this is where it all begins. The conducive culture then should lead to the risk-tolerant and open-minded approach that is required for a favorable ecosystem to come into being (EE2).

²⁴ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

²⁵ <https://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/#761a02c75fe8>

The professor from Portugal largely agrees with Isenberg's take on the domains, however would amend the conducive culture domain by naming it instead a cooperative culture (UP1). The representative of one of the large companies from Estonia does state that, while all of the domains presented are relevant, the approach does not cover the drive of entrepreneurship, which in his view should be the essence of entrepreneurship and such also the essence of an entrepreneurship ecosystem (CE1). The Pipedrive representative once again categorizes the domains into two. Firstly, he qualifies the quality human capital, venture-friendly markets for products, the availability of appropriate finance and a conducive culture in to the category of key components. Secondly, he adds the range of institutional and infrastructural support, enabling policies and leadership as secondary components (EP2). In the case of Isenberg's (2011) domains, one of the Estonian investors outlines, that removing one of the domains would surely make it extremely challenging for a successful ecosystem to be created (IE1). A respondent from Telia Vunk accelerator would propose to add mentors to the list of domains as they are crucial from the point of view of entrepreneurs (CE2). Her colleague adds that he would propose to add a supportive network and the formal legal framework from the perspective of the startup (CE2).

4.2.3. Connections/Interconnectedness

As per one of the founders, the essence of the ecosystem is *creativity*. You can have all necessary infrastructure available, but if there is no creativity nothing new will emerge. A creative environment requires openness and strong connections among the actors. Hence the *interconnectedness* is certainly of relevance (EP1). An Estonian investor adds that the key drivers and the interconnectedness of the actors within the ecosystem certainly increase the likelihood of successful startups emerging from the specific entrepreneurship ecosystem (IE2). One of the founder/mentors believes that the pillars/domains are essential, but not causal. Without those in place it would be much harder to succeed, however there are no guaranteed. The interactions between the actors are everything (EE2). The Sonae representative agrees that having the right conditions met is certainly beneficial and does make it more probable that a lively and vibrant ecosystem emerges, however in the end of the day it all boils down to the actors of the ecosystem working together – this is what it is always about (CP2).

The investor from Red Angels fully agrees that statistically, the success comes from the connectedness/interactions between the actors of the ecosystem. Individual success however is largely dependent on the right kind of entrepreneurs (IP1). As per investor one of the Estonian

investors, the interactions do build the basis for success. Of the highest importance in her view is the cultural approach that the entrepreneur is the most important actor of the ecosystem (IE1). One of the respondents from a Portuguese ecosystem does add that the interconnectedness is a critical success factor. The guarantee of success however lies with the entrepreneurs. The drive that they have and the passion for the business they do is what determines the success (UP1). As per the representative of a large company in Estonia, there is no simple formula that guarantees success, however the fact that the right elements are in place and connected in a well-working manner, do build a foundation for success (CE1). The Portugal Ventures representative adds that he is convinced that the interconnectedness is at the heart of a favorable ecosystems and that the actors do depend on each other, which therefore means that the success of one should in a well-functioning ecosystem be also the success of the other (IP2).

4.2.4. Building vs. evolving

In order to determine how an entrepreneurship ecosystem can come into existence and what can be done in order to the ecosystems to emerge, the actors of the ecosystems in Estonia and Portugal were asked about by what means in their views such phenomena come into being. The question posed was in the form of whether in their view entrepreneurship ecosystems can be built or should they rather organically evolve into being.

- ***Building***

Out of the 20 respondents (19 interviews), five firmly replied that in their view the ecosystems can and should be built. The professor from ISCTE university states that in Lisbon for example it was built from scratch. Startup Lisboa and all the relevant funding mechanisms were established. He adds that the results of taking on such a venture can end up being far from the expected outcome, but the conditions for an ecosystem can indeed be built (UP1). The Startup Lisboa representative agrees with the previous respondent and adds that in order for an ecosystem to be built, an understanding must be obtained as to what are the elements already existing in the location and to also map what is needed for an ecosystem to truly come into being (PP1). The representative of an Estonian large company adds in order for the process of building the ecosystem to get the kickoff, firstly an agreement in the society has to be achieved, in which all the counterparties come to a mutual understanding that indeed a need for the building of an ecosystem exists. These counterparties he refers to are the state, universities,

investors, entrepreneurs and the others – largely speaking the actors of the ecosystem. All of the relevant actors must have a common goal - that is how an ecosystem can be built (CE1). Two founders from Estonia agree that it can be built, however only during a long period of time (EE1, EE3). One of them continues by saying that if in terms of building it is meant that the government takes an executive decision to build the next Silicon Valley and that is that, then this is not how it is done (EE3).

- ***Evolving***

Seven out of the respondents were of the opinion, that an ecosystem must evolve into being. As per the Startup Estonia representative “*An ecosystem is a living and breathing phenomena and as such it cannot be either managed or built.*” (PE1). The Pipedrive representative confirmed that an ecosystem can emerge by evolving, however also adding that certain steps of planning and support can help evolve it in a better and a more rapid manner (EP2). One of the investors from Estonia adds that the actors within the ecosystem can facilitate and support the development of it, however, from there on it has to take its natural path that requires the time to evolve in its own course (IE2). The TalTech Mektory representative points out that a big part in the process of evolving falls on the enthusiasts within the ecosystem. Meaning that these are the individuals with the mission and drive to make change happen in the ecosystem and to be the driving force behind assisting in progressing the ecosystem. In the Estonian example, this is often done by private initiatives and not so much on a governmental or public funding level (UE1). One of the Portuguese entrepreneurs adds that in order for an ecosystem to start evolving, certain incentives can stimulate the beginning of it and tools can be put in place to help solve the problems that the entrepreneurs are facing, but as a rule, the ecosystem should still organically evolve (EP11).

- ***Hybrid approach***

Six of the respondents, saw the emergence of an ecosystem somewhat of a hybrid process – a mix of building and evolving. For instance, the Sonae representative stated that the initial conditions can and should be built (as it has been in Portugal), but from there on it should continue to evolve organically (CP2). As per one of the investors from Portugal: “*Such processes are always a combination of deliberate development and evolution.*” He continued

on by saying that key factors here are the entrepreneurial vision of the government and the right leadership of the many actors present in the ecosystem (IP1). Both the representative from Telia Vunk from Estonia and the representative from EDP called the situation of this building vs. evolving the “chicken and egg situation” (CE2, CP1). The Telia Vunk representative added that this is the true question, whether it is firstly the favorable ecosystem that emerges or rather a startup that is about to conquer the world (CE2). The EDP representative more specifically claims that the infrastructure needed can be built and then it can involve based on the input of the entrepreneurs and the other actors within the entrepreneurship ecosystem (CP1). One of the Estonian investors elaborates further on the matter. She is inclined to say that the ecosystem should evolve however significant impact can be made with the elements that can be facilitated or built, in particular she outlines policy measures that can accelerate or catalyze the development of the process. More specifically she highlights the following aspects (IE1):

- *in the case where venture money is scarce, VC funds with the cornerstone investments by public investors could help in lowering the risks for the private actors to step in;*
- *the legal environment can be built to attract certain activities (tax incentives for investing into startups etc.);*
- *accelerators can be supported by the public funding to motivate the private funds to come in and enable the program provider to fly in the role models and mentors.*

She concludes by saying that in the building and incentivizing process the examples of the good role models are of crucial importance (IE1).

One of the founder/mentors of the Estonian ecosystem rephrases the question and as such answers that an entrepreneurship ecosystem can indeed be built, however a successful one cannot. He also agrees with the other respondents who see the hybrid approach applicable here, that the seed for the ecosystem can be planted and incentivized with certain measures and as such create favorable conditions, but from there on the magic, as he calls it, must happen on its own, hence the ecosystem must organically evolve from that point onwards (EE2). The following table has been compiled to provide an overview of how the interviewees answered to this question.

Table 3 - How do entrepreneurship ecosystems come into being?

Actor	Building	Evolving	Hybrid approach
CP2			x
CP3		x	
IP1			x
IP2		x	
EP2		x	
UPI	x		
IE1	x		
CE1	x		
CE2			x
UE1		x	
CPI			x
IE2			
IE3		x	
PE1		x	
EE1	x		
PP1	x		
IP3 (no answer)			
EE3			x
EPI		x	

Source: Author elaboration based on the interview responses

As it can be concluded based on the interviews, a majority of the respondents, favor the hybrid approach or rather the evolving one. This demonstrates that the actors in the scope of this research part, do highlight the fact that *an entrepreneurship ecosystem is something that is*

living, breathing and constantly moving and evolving, not as much as something that consist of pillars and then remains solid and sturdy.

4.2.5. Economic development strategy

One of the founders operating in the Portuguese ecosystem strongly believes that development of a favorable entrepreneurship ecosystem is surely a good strategy for economic development. He does outline that in Portugal they have the talent, the creativity, the curious mindset of explorers, quality education and an open economy – in short, all the means to create as much value as possible (EP1).

A representative of one of the Portuguese large companies fully agrees that it should be seen as such. Working on the favorability of the entrepreneurship ecosystem generates jobs, particularly highly specialized ones, which enable for the products from research and development be brought to the market. Often, startups work on niche solutions, however these solutions are frequently ones, which can unblock certain existing challenges (CP2). The Vodafone Powerlab representative does agree that it could be an economic development strategy, which would then enhance the revenues. He does however make a point in saying that the focus of the ecosystem should still be the connections and collaboration that help the actors to learn and grow together (CP3).

The investor from Red Angels believes that as the enhancement of the entrepreneurship ecosystem triggers new ideas and know-how for the established companies in the country. Successful startups generate jobs and add value to the economy as a whole (IP1). The other Portuguese investor is of the opinion that for instance in Portugal the development of the entrepreneurship ecosystem has started as an economic development strategy, but in time the system has grown on its own and has not really been doing so with the overall economic strategy in mind (IP2).

As Pipedrive is present in both countries analyzed for this dissertation, their representative has outlined this aspect per country. In Portugal he confirms that the enhancement of the entrepreneurship ecosystem can indeed be seen, as an economic development strategy, as the ecosystem has been built with that thought in mind, by establishing the relevant pillars. In Estonia, he states, the government and the related institutions have contributed by letting the entrepreneurs operate without bureaucracy (EP2).

The professor from ISCTE is convinced that it should be seen as such. The strategy should not be focused on envisioning it only on the local level, but also by taking into account the international perspective. Hence, fostering the entrepreneurship ecosystems should be a central part of the economic development strategy (UP1). The Startup Lisboa respondent confirms as the majority of the interviewees, that it is of the utmost importance and that the creation of the entrepreneurship ecosystem in Lisbon has in fact been the plan and economic development strategy of the Lisbon municipality (PP1).

One of the Estonian investors adds that there are certainly more elements to an economic development strategy than only supporting the local entrepreneurship ecosystem, however the logic does remain the same – in developing the relevant public policies and measures the voice of the entrepreneur has got to be heard (IE1).

A founder from Estonia wholeheartedly agrees. In his view the formula is rather simple, educated and smart people are without a doubt a significant asset to a country and it makes also sense that these people want to earn well. As a result, the state receives more taxes from the specialist workforce and it creates significant value. In his view this is certainly one of the key aspects that a country's economic development strategy should have in place (EE1). Another founder/mentor/investor adds that the governments would be foolish not to see it as such (EE3). The third entrepreneur/mentor from Estonia adds, that just on the basis that the entrepreneurs are the people who are literally innovating the future and as such also building the economy of the future. These kinds of ventures can take on low-cost and low-risk experience for the government and the large corporations and as such the government should make every effort to support the development of a favorable entrepreneurship ecosystem (EE2).

Lastly, one of the Telia representative, agrees, but does add that it should be a truly long-term strategy, as in his view in the short term, the success with it cannot be achieved. The ecosystem should have the vision in place, and it would most probably take 10+ years for certain goals to be reached and a specific image of the ecosystem to be created (CE2).

4.3. The entrepreneurship ecosystems in the examples of Portugal and Estonia

4.3.1. Introduction

So far, the analysis of the dissertation has largely focused on the overall concept of entrepreneurship ecosystems, the central terms pertaining to it and the key drivers of a favorable entrepreneurship ecosystem. This subchapter will now be presenting to specific examples of entrepreneurship ecosystem in the example of two countries – Portugal and Estonia. Firstly, certain secondary data that has been reviewed will be introduced in order to provide a background and comparable grounds for the respective ecosystems. Then, based on the interviews conducted, the findings relating to how the actors perceive the ecosystems they are operating in will be outlined and analyzed.

4.3.2. Snapshots of the countries analyzed

The aim of the following subchapter is to present the key data to introduce the entrepreneurship ecosystems in both Portugal and Estonia. The subchapter begins with the overview presented in **Table 4** that outlines the key economic figures of both countries. These figures have been added to provide an understanding of the size of the country and the respective economies. In the following paragraphs, the specifics in terms of new enterprises/startups, the respective funding received, and other pieces of key data will be presented and analyzed.

Table 4 - Key economic country facts

	Portugal	Estonia
Population:	10,355,493 (July 2018 est.)	1,244,288 (July 2018 est.)
GDP (purchasing power parity):	\$314.1 bn. (2017)	\$41.65 bn. (2017)
GDP per capita (PPP):	\$30,500 (2017 est.)	\$31,700 (2017 est.)
Labor force:	5.233 m. (2017 est.)	670,200 (2017 est.)
Exports:	\$61 bn. (2017 est.)	\$13.44 bn. (2017 est.)

Export commodities:	<i>agricultural products, foodstuffs, wine, oil products, chemical products, plastics and rubber, hides, leather, wood and cork, wood pulp and paper, textile materials, clothing, footwear, machinery and tools, base metals.</i>	<i>machinery and electrical equipment 30%, food products and beverages 9%, mineral fuels 6%, wood and wood products 14%, articles of base metals 7%, furniture and bedding 11%, vehicles and parts 3%, chemicals 4% (2016 est.)</i>
Imports:	\$74.73 bn. (2017 est.)	\$14.42 bn. (2017 est.)
Import commodities:	<i>agricultural products, chemical products, vehicles and other transport material, optical and precision instruments, computer accessories and parts, semiconductors and related devices, oil products, base metals, food products, textile materials</i>	<i>machinery and electrical equipment 28%, mineral fuels 11%, food and food products 10%, vehicles 9%, chemical products 8%, metals 8% (2015 est.)</i>

Source: *The CIA World Factbook*²⁶

Table 5 - Snapshot of the 2019 country data

	Portugal	Estonia
Number of startups (until 31.08. 2019):	1813	1127
Funding in 2019 (until 31.08.):	€ 0.7m	€ 70.1m
Exits in 2019 (until 31.08.) :	€ 0	€ 28.9 m

Source: *Dealroom.co*^{27,28}

When researching for the relevant secondary data, certain sources referred to the ecosystems on a country level, whereas in other cases the specific cities were outlined. In the following subchapters this will be further elaborated on based on the responses received from the actors operating within the Estonian and Portuguese entrepreneurship ecosystems. However, in order to provide additional ecosystem specific data, the information about Lisbon and Tallinn as

²⁶ <https://www.cia.gov/library/publications/the-world-factbook/>

²⁷ <https://app.dealroom.co/heatmap/Portugal>

²⁸ <https://app.dealroom.co/heatmap/Estonia>

entrepreneurship ecosystems will be outlined. This data has been collected largely by the Startup Heatmap Initiative and certainly assists in creating the relevant snapshot of the Lisbon and Tallinn ecosystems accordingly.²⁹

Table 6 - Key figures about the Lisbon and Tallinn ecosystems

	Lisbon	Tallinn
<i>Rank as per the Startup Heatmap Europe of 2018:</i>	5	13
<i>Sum of investments in 2018:</i>	€358m	€190m
<i>% of foreign investors</i>	60%	71%
<i>Most active investors:</i>	Portugal Ventures, Caixa Capital, Faber Ventures	Toivo Annus, Jaan Tallinn, Ambient Sound Investments
<i>Most active accelerators:</i>	Building Global Innovators, Lisbon Challenge	Startup Wise Guys, Ajujaht, Vunk
<i>Median Salary Software Engineer:</i>	€ 19,391	€ 27,438

Sources: *Startupheatmap.eu*³⁰; *Dealroom.co*.³¹

As it can be seen from the **Table 6**, above, Lisbon has in recent years established itself as a popular startup ecosystem and such is ranked 5th as per the Startup Heatmap survey (Startup Heatmap 2018)³². Certainly, a key aspect in becoming more renowned and increasing its visibility is the hosting of the Web Summit technology conference. Although Lisbon has only recently emerged as a hub for startups, it is already proven itself to be a rather favorable ecosystem, which offers a dynamic environment for startups to expand and grow in a sustainable manner.³³

²⁹ <https://www.startupheatmap.eu/>

³⁰ <https://www.startupheatmap.eu/>

³¹ <https://app.dealroom.co/markets/cities>

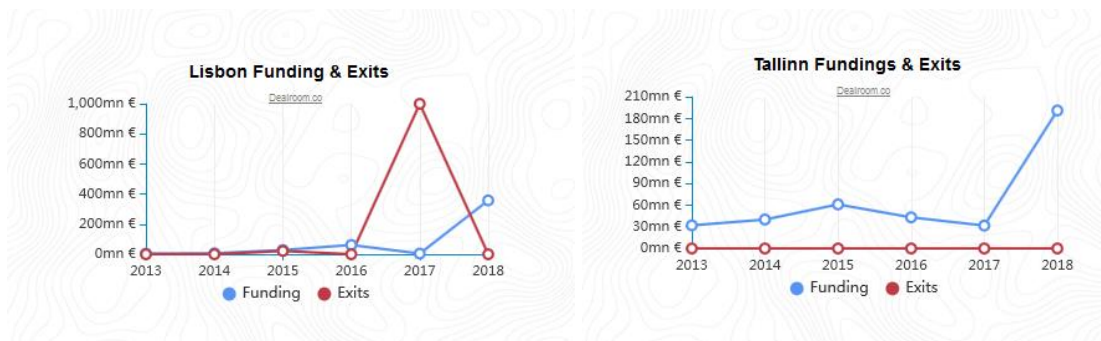
³² <https://www.startupheatmap.eu/>

³³ <http://www.startupheatmap.com/what-you-need-to-know-about-lisbon-and-the-websummit/>

Tallinn has been described as a hidden startup wonderland in Northern Europe by having a business-friendly and innovation-oriented culture. The country, has become known as an important IT technology development center in Europe largely thanks to its knowledge-based economy and a rather impressive startup portfolio that consists of success stories such as Skype, Transferwise and GrabCad just to name a few.³⁴ **Figure 6** and **Figure 7** below, present the data on the funding and exits within the Lisbon and Tallinn ecosystems for the years 2013-2018.

Figure 6 - Lisbon Funding & Exits

Figure 7 - Tallinn Funding & Exits

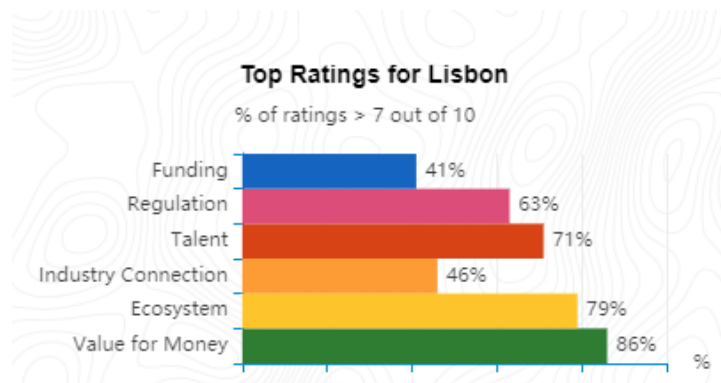


Sources: Startup Heatmap; Dealroom

Sources: Startup Heatmap; Dealroom

Figure 8 and **Figure 9** outline the ratings the respondents in the Startup Heatmap survey of 2018 have given the Lisbon and Tallinn entrepreneurship ecosystems per the different relevant categories.

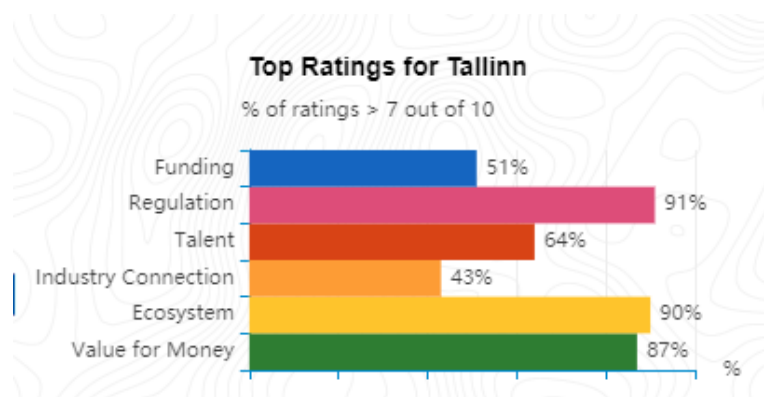
Figure 8 - Top ratings for Lisbon per category



³⁴ <https://magazine.startus.cc/business-friendly-and-innovation-oriented-city-of-tallinn/>

Source: [Startupheatmap.eu](https://www.startupheatmap.eu)³⁵

Figure 9 - Top ratings for Tallinn per category



Source: [Startupheatmap.eu](https://www.startupheatmap.eu)³⁶

4.3.3. Evaluation based on the interview respondents

During the course of the interviews conducted, the respondents were asked to rate the ecosystems they are operating in. At this point, the opinions among the Portuguese respondents were largely divided regarding the fact, whether Portugal should be considered as one whole ecosystem across the country or a more correct approach would be to distinguish Lisbon from the other regions. In the case of Estonia, the entrepreneurship ecosystem as per the respondents, was considered to be one whole ecosystem, although a significant number of startups are more active in the capital, Tallinn.

As it can be seen from the table below, the average ratings were respectively 6 for Portugal, 7 for Lisbon and 6.65 for Estonia. In this case it is to be mentioned that the respondents were asked to rate only the local ecosystem they were familiar with and themselves in fact operating in.

All of the respondents from Portugal rated the Lisbon ecosystem higher – mostly in range of six to eight on the scale of 1-10 - than they did for the rest of Portugal, in which case the ratings vary from four to seven. Ratings for the Estonian ecosystem as per the actors range from five to eight. A rather interesting observation can in this case be made: the ratings provided by the Portuguese respondents are in general more positive and optimistic (giving higher grades for

³⁵ <https://www.startupheatmap.eu/analytics/city/Lisbon>

³⁶ <https://www.startupheatmap.eu/analytics/city/Tallinn>

the advancement of the past recent years) in comparison to the Estonian ones. This could in some ways be due to Estonians being somewhat more modest and pessimistic in their mindset and approach. It is also worth mentioning that Pipedrive, the startup that is operating in both the Portuguese and Estonian entrepreneurship ecosystem, rated the Portuguese ecosystem with a six and the Estonian ecosystem with an eight respectively. The above ratings are backed with the following reasoning:

Table 7 - Evaluations of the ecosystems by the respondents

	Estonia	Portugal	Lisbon
CP2		7	
CP3		6	8
IP1		7	
IP2		7,5	
EP2	8	6	
UP1		4	7
IE1	7		
IE2	8		
PE1	7		
EE1	5		6
EE3	6		
CE1	6.5		
CE2	7		
UE1	6		
CP1		8-9	
PP1			8
IP3 (no answer)			
EP1			6
EE2	6		
Average:	6.65	6	7

Source: Author elaboration, based on the interviews conducted

The higher rating of Lisbon's ecosystem, particularly in comparison with the rest of the country, is often reasoned with its fast pace development (IP2, CP1, CP2). As one of the Portuguese founders has outlined: “Lisbon as a hub has got much more focus than the rest of the country and is being built on a political level” (EP1). The Startup Lisboa representative adds, that the Lisbon ecosystem is young, dynamic and very well integrated (PP1). The respondents from two large companies operating within the Portuguese ecosystems both agree that radical change

has occurred in the span of five years and that during that time the Lisbon ecosystem has advanced significantly (CP1, CP2).

Respondents who do not view Portugal as one ecosystem, remark that the ecosystems are relatively closed within regions. Portugal as a country is lacking collaborative community, as there is no real exchange of knowledge & tools between the local entrepreneurship ecosystems (EP1). It has been added by one of the respondents, that in his view, there is a lack of focus on what is the goal of creating entrepreneurship ecosystems in Portugal, he continues on by saying that today, most of the entrepreneurial efforts are done in Lisbon, some in Porto and Coimbra, but that is largely it (UP1).

To reason their ratings of the Estonian ecosystem, the Estonian respondents often highlight the Skype success story as having significant impact on the local ecosystem, as it laid the foundation for an active and exciting entrepreneurship ecosystem to emerge and inspired other (young) entrepreneurs to start their own businesses. As per one of the startup founder/mentors, Estonia may have the highest number of startups on per capita basis (EE2). Founder/mentor/business angel from the Estonian ecosystem and one of the investors agree that the Estonian entrepreneurs can be seen as strong and have been rather successful in the region, but also have a high level of connectedness on a global level (EE3, IE2).

The downsides of the Estonian ecosystem are to a great extent related to its small size, as outlined by one of the respondents: *“It will always be held back by the fact that the market here is so small. If you do want to be a global business you need to get out as soon as possible, at least from a business perspective.”* (EE2). The small size of the country also has an impact on the talent pool, which is something that both one of the investors and the respondent from a large local company pointed out, as there are at times not a sufficient number of people who have the relevant high-quality technical, sales and marketing skills and also the fact that no new generation of serial entrepreneurs has emerged (IE2, CE1). On the forward-looking perspective, although Estonia is not the kind of international hub, where all entrepreneurs would like to move, efforts are being made to kick this off with the startup visa and e-residency (EE3). Another one of the founders, finds that a solid foundation has been created and that going forward Estonia needs to find its niche in the startup world and based on that plan a way forward for the future, as he concludes by stating: *“The world certainly does not need another Silicon Valley, we must find our own ways to shine and to stand out.”* (EE1).

The above subchapter was drawn out to provide some insights in terms of numerical data about the respective entrepreneurship ecosystems. As the scope of the interviewees is limited to merely twenty respondents (from nineteen interviews), no significantly profound conclusions can be drawn based on it, however, it should provide a sense of how the specific actors approached for the purposes of this dissertation evaluate the ecosystems they are operating in at this point of time.

4.3.4 Characteristics of the ecosystems in Estonia and Portugal

The previous subchapter outlined the ratings provided to the local ecosystems by the interviewees. In order to obtain a deeper understanding of the environments they are operating in, the interviewees were asked to further elaborate on the specific strengths, weaknesses, improvements that could be made and the unique aspects of their respective ecosystems.

- ***Strengths - Lisbon & Portugal***

Firstly, as a strength of both the Lisbon and Portugal ecosystems, the respondents have highlighted the ***presence of world-class talent*** – motivated, innovative and creative new entrepreneurs (CP2, IP2). The Sonae representative adds that their continuity is nurtured by the high level of education and training at the Portuguese universities (CP2). It has been also mentioned that the labor costs in Portugal are relatively low compared to many other countries in Europe, hence the ***access to high-quality labor force at an affordable price*** can certainly be considered an asset (CP1). Additionally, it is frequently mentioned by the respondents that Portugal has historically been open to the world and as such nowadays fostering international talent and internationally focused startup founders (IP2, IP3). Hence there has been a longstanding approach to support ***the culture of openness, international connections and the right kind of mindset for entrepreneurship ecosystems to flourish***. It has been pointed out by several respondents that these connections are also fostered by the fact that the local population is inclined to have a ***good command of English and foreign languages*** in general and the willingness to openly communicate in them (CP1, EP2).

Several of the respondents do also outline that the ***communities, quality relationships and the interconnectedness between the local networks*** are a solid strength in terms of the ecosystem in Portugal (CP2, CP3). It is worth mentioning that some other have however contradicted it, by outlining the lack of communication between the regions, this shall be further elaborated on the weaknesses side.

Secondly, Portugal has an ***attractive geographical location, a favourable climate and convenient time zone*** for Latin America, the United States and also Europe. Additionally it is easy to reach due to its ***well-developed infrastructure*** (CP2, IP3) – this is often considered one of the biggest strengths of the Portugal ecosystems, mentioned by most Portuguese respondents for this dissertation.

Another aspect outlined by several respondents is that Portugal has been gaining international attention recently, which has enabled for more funding to come about in the local ecosystems due to the ***increased visibility*** (EP2). An event that is increasingly drawing attention to the Lisbon ecosystem is the annual Web Summit technology conference, which serves an attractive project promoting Lisbon and Portugal.

Lastly, it has been pointed out that the Portuguese ecosystem has a ***good mix between different business areas*** - startups in ICT, in the medical space, in the field of social innovation, hardware and industry, which can certainly be considered as a strength as well (CP2).

- ***Strengths – Estonia***

All of the interviewed Estonian respondents agreed that the local ecosystem is ***active, dynamic and rather well-connected*** both on a local level, but also having many relevant international points of contacts. A big advantage of Estonia in respect of its entrepreneurship ecosystem to be mentioned here is definitely the ***overall supportive culture***, which is also coming from the public sector by also supporting various legislative measures e.g. the startup visa project and the e-residency opportunity offered (PE1).

Many of the respondents also highlighted the ***right mentality and global-first mindset*** – thinking big, going global from day one as the local market is so small. This has enabled the Estonian entrepreneurs to build quality enterprises, create unique products and services with global potential and to enter respective the markets at the right time (PE1). Estonia has had ***a number of great success stories*** - *Skype, Transferwise, Pipedrive, Starship Technologies, Guardtime, Fortumo, Skeleton Technologies, GrabCad*) - these ***outstanding role models*** have inspired new entrepreneurs to come up with ideas. Additionally, the first rise of serial entrepreneurs and successful failure stories (failed and started again) has been witnessed and as such has certainly served as a source of inspiration (IE1, EE1, IE2). As a result, the Estonian entrepreneurs have repeatedly succeeded in building strong enough ventures to attract international funding (IE1).

Lastly, but not less importantly, the working environment in Estonia is still considered to be *relatively low cost with high-quality talent* that that ensure for the ecosystem to at least for the time being remain attractive.

- ***Weaknesses - Lisbon & Portugal***

When speaking about the weaknesses of the Portuguese ecosystems, it has been mentioned, that there are *huge asymmetries between Lisbon and the rest of the country* (UP1). It was pointed out by both the Pipedrive and Portugal Ventures respondents, that Portugal *has not yet generated a critical mass of home-bred success stories* (EP2, IP2), which could further enhance the local entrepreneurship ecosystems.

Several respondents identified the main weakness of the Portuguese ecosystems the *limited access to risk capital* (IP1, Ip2). Other aspects that were frequently mentioned were the *relatively small market, the lack of clear vision from authorities* (CP2) and *a lack of structured mentorship, real incubators* (EP1). Additionally, the Vodafone Powerlab representative mentioned the fact that the large companies are not prepared to actively engage in innovation, which can certainly be considered a downside of the ecosystem (CP3).

The Startup Lisboa representative did point out that there is a certain shift in the local mindset that is to be made. He outlines that currently *failure* is still a theme that is looked down upon in the Portuguese society and as such this is one of the biggest challenges to overcome in the local ecosystems, as the mindset towards risk-taking and an open-minded attitude towards failure are characteristics that a favorable entrepreneurship ecosystem possesses (PP1). This is however rather an interesting point, as several other respondents have only commended the mindset of the actors present in the respective ecosystems.

- ***Weaknesses – Estonia***

The Estonian respondents have identified as the main weaknesses of the local ecosystem the following aspects: *a shortage of funding, limited local venture capital, a limited supply of experienced workforce and shortage of talent and continuity* (IE1, PE1). It has been added by one of the investors that there is not a sufficient number of serial entrepreneurs, who would collaborate with universities to build new ventures based at the research & development departments of universities. She also continues by stating that unfortunately there is *no internal market to test the new innovative products and services onsite* (IE1). Several other

respondents agree and highlight that due to the small size of the market, the only option is to think on a global scale from the very beginning (EE2, PE1, CE2).

Estonia does have a relatively *unfavourable location* (e.g. the geographical and time distance to California for instance and somewhat poor flight connections) in the busy and competitive startup world. In addition to that there are unfortunately, *no headquarters or research & development departments of large corporations*, which would enable collaboration with the local startups, potential later stage funding and exit opportunities (IE1). The Telia Vunk representative adds that a downside is certainly the fact that the *local large companies tend to be passive* in general (CE2).

In addition to the aforementioned weaknesses, a big downside that has been mentioned by the Estonian respondents is the *lack of a supportive environment/infrastructure* to bring in talent from abroad (terms such as hostility towards foreigners/racism have been mentioned, additionally also the lack of international schools, top universities and jobs for the spouses have been pointed out) and also a certain degree of *legacy mindset* still persisting after the Soviet times that can at times hinder the development of the local entrepreneurship ecosystem (PE1, EE2).

- *Contradictions/main differences*

There were several contradictory opinions regarding the strengths and weaknesses, herewith a few examples: (1) an Estonian investor considers great mentorship from local people as a strength (IE2), whereas the Startup Estonia representative, on the other hand, finds that the low quality of mentorship is a weakness of the Estonian ecosystem (PE1); (2) The Startup Lisboa respondent mentions the cultural/mental issue of failure as a big problem for their ecosystem (PP1), at the same time other respondents highlighted Portuguese mindset as a strength for their ecosystem; (3) The Estonian respondents in general praised the state for its supportive activities, but the Telia Vunk representative pointed at its unclear role and lack of focus (CE2); (4) The fact that Estonia is a very small country is seen by some as strength – close community – “everyone knows everyone”, coming up with ideas and testing those on the local market is easy (IE2). and by others as weakness – ‘shortage of talent, shortage of funding’, no significant internal market and hence the need to go global from day one, because otherwise the companies will not survive as scaling is not possible in the local market. When reviewing the opinions of the Estonian and Portuguese respondents in respect to their local entrepreneurship ecosystems,

some common features can be identified. *As strengths of both ecosystems, an active community, solid networking, innovative approaches and motivated new entrepreneurs have been highlighted. The lack of access to risk capital and funding is considered as a weakness of both ecosystems.* The respondent from Portugal Ventures has additionally noted that startups from both Portugal and Estonia *always need to prove* (unlike the Silicon Valley companies) *that they can deliver the quality they are known for* (IP2). In terms of the mindset/mentality, in both countries several strengths have been highlighted as the *going-global-from-day-one approach* is something that both countries are faced with and therefore must have an *internationally-oriented approach*. From the weaknesses side, in Lisbon it has been mentioned that to agree *failure is frowned upon*, whereas in Estonia the *legacy mindset* from the Soviet times is something that is considered a weakness.

The main advantages of both ecosystems as seen by respondents are that *Lisbon and Portugal are favoured by their geographical location*. Another aspect in favour of Portugal is the *already historical culture of openness*; whereas Estonia, due to its location and historical circumstances was until quite recently *a completely closed society* and as opening up takes time, more significant changes should become visible with the next generations.

A big advantage in favour of the Estonian ecosystem is the aspect of the *massive success stories that have occurred and as such are serving as a source of inspiration and great role models*, who have quite literally kick-started/ launched the entrepreneurship ecosystems into being.

- *Uniqueness - Portugal*

The Portuguese ecosystems, especially the Lisbon one, are growing at a fast pace. This is due to a variety of reasons. The Portuguese respondents at the first place considered the *abundant source of quality talent* as one of the most unique aspects of the ecosystem, as there are hard-working, qualified, knowledgeable and motivated both local and foreign people present. Another aspect mentioned by all the respondents is the *favorable geographical location, climate, cool ambiance and excellent quality of life* in both Lisbon and Portugal (IP2, CP2, EP2). Additionally, the relative *affordability of the overall environment* and also for hiring quality labor force is considered a significant asset (UP1, CP1). It was also mentioned by many that additionally that recently *increased visibility* due to Web Summit and the success stories of Farfetch for instance have certainly presented the unique aspects of the Portuguese entrepreneurship ecosystems (IP2, EP1).

- **Uniqueness - Estonia**

In terms of the ecosystem in Estonia, there is a unanimous agreement that *Skype as a success story and role model, laid the foundation for the Estonian (startup) entrepreneurship ecosystem*. Skype has also been followed by other success stories as mentioned previously and having these role models certainly sets the local ecosystem apart from its peers and give it a significant advantage. Due to the *visibility obtained and the unique contacts made* by the success stories on a global scale, an increasing number of investments has been pouring into the local market and it as a result enhances the competitiveness and significantly motivates the new generation of founders (EE1, IE2).

In addition to the aforementioned, various unique aspects in terms of the government's approach, have been highlighted such as the, different IT- solutions the state has implemented, the e-residency program and the startup visa, the supportive tax and economic policies and also the willingness to innovate by being one of the first countries to consider regulating artificial intelligence on a state level (CE1, EE3, EE1, EE2).

- **Improvements - Portugal**

Improvements to be made as seen by the interviewed Portuguese actors of the ecosystem are in the first place *mostly pointed at the government and its role*. For instance, it has been outlined by one of the respondents that the public policies should embrace the economic (entrepreneurship) environment and adds that the case of Lisbon has been an excellent example of good public policy, however the asymmetry across the country persists (UP1). One of the startup founders adds that the *public policies should have a clear focus*, and in his view, their role should be to create the connections between the government and the large corporations for example (EP1). Additionally, the investor from Red Angels points out the fact that the possibilities for co-funding should be widened by the government policies (IP1). The representative from EDP outlines the need for a governmental entity to be created, who would promote and fund bringing global players such as WeWork, Google Campus etc. into the Portuguese ecosystems (CP1). The respondent from Pipedrive does point out that from his perspective *an overfertilization of startups has occurred*, as it is very easy to obtain subsidies for ideas that are not truly viable. He would propose to have less subsidies (or allocate those subsidies in a more intelligent manner) and more market economy to bring about better results (EP2).

In addition to the aforementioned, the respondent from Portugal Ventures highlights that more international founders should be attracted, and large corporations should be incentivized to collaborate with international startups in order to speed that process up (IP2). Lastly, a rather relevant suggestion regarding the improvements to be made, the Sonae representative has firstly pointed out that there should be a heightened focus on the cooperation between the actors within the ecosystems (e.g. the incubators/accelerators) and also in order to bridge the traditional and new industries, it is suggested to further enhance and incentivize the collaboration between startups and the traditional industries, which could together create exciting new synergies (CP2).

- **Improvements - Estonia**

Starting from a lighter note, it was in fact suggested by the Telia respondent that the biggest improvement that could be made in Estonia, would be to change the climate (CE2). Overall though, as it was the case with Portugal, then also in Estonia, **many of the improvement suggestions were directed at the government**. Although in the part covering the unique aspects of Estonia the main good things achieved were mentioned, many of the respondents do still see areas of improvement from their side. One of the respondents from the Telia Vunk accelerator for instance does point out, that the government **should have a clear vision as to how to support the local ecosystem** (CE2). One of the local investors supports that statement and adds that so far good work has been done, however with the next vision, it should be made clear how can the Estonian entrepreneurship ecosystem remain relevant also in the year 2030 and going forward (IE2). From there on, several respondents did state that the **tax legislation** could be more reasonable and supportive in terms of the social taxes applied on the workforce (EE1, IE1). The investor continues by stating that there could be increased support to early stage prototyping and the **commercialization of intellectual property from the universities**. In addition to that, she would suggest for the public authorities to purchase and encourage to outsource the products and services from startups to enable the respective markets (IE1). One of the founder/mentors adds that it would be exciting if the government would look into **purchasing more services and products from early stage startups, as it would provide significant support to the ecosystem** (EE2). The Pipedrive representative also adds that the **immigration policies should be further enhanced** to ensure that talent can be continuously attracted to the Estonian entrepreneurship ecosystem (EP2).

The representative of one of the large companies active in the Estonian ecosystem points out that in his view the actors within the ecosystem should themselves have a ***strong willingness to make things happen and contribute as much as possible to the creation of a favorable entrepreneurship ecosystem***. It is not enough to wait around and expect for taxation policies and other support system to improve. He continues by stating that it is everyone's responsibility to make a difference (CE1). Lastly, as a very relevant and interesting aspect, one of the startup founders highlights that the actors within the Estonian ecosystem should seriously consider ways of ***how to better integrate the ethnic Russian community into the entrepreneurship ecosystem***, as there is significant potential and talent available there (EE2).

4.3.5. Attractiveness in terms of investments

- ***Portugal***

Several of the Portuguese respondents confirmed that the local ecosystems, especially the Lisbon one, are ***quite attractive to invest into***, as lots of companies have in recent years emerged from there and therefore also the ***visibility of the ecosystem has significantly grown*** (IP3, CP1, UP1, IP2, EP2). The Pipedrive respondent confirms that nothing is broken in the Portuguese ecosystem and as a whole he considers it to be one of the most attractive entrepreneurship ecosystems to invest into in Europe, if not the world (EP2). Several interviewees also confirmed that the increased visibility, and attractiveness, in terms of investments, has been in some ways due to the Web Summit being held in Lisbon for several years already (UP1, EP1). The respondent from one of the large companies operating in the Portuguese ecosystem has added, that the Portuguese have a way of doing a lot with limited resources and as such the local entrepreneurs are very driven (CP1). One of the Portuguese investors outlined that in his view, currently, the most attractive part of investing in Portugal is the fact that the local ecosystem is ***growing in a healthy and structured manner***, step by step at a very fast pace (IP2). A startup founder from Portugal noted, that although it can be deemed as attractive, it is hard to be entirely certain until true success stories have emerged from the local ecosystem. He continues by saying that he sees that for now most of the investments have been coming from a local level, not from an international scale (EP1).

The Sonae representative points out that in her view, the focus should not solely be on the investments into startups, but investments to the country as a whole. She continues by saying, that ***a more favorable environment for foreign investment in Portugal should be created*** by

the legislation relating to taxes and the ease of doing business. She concludes that provided that these aspects are further enhanced, the overall business environment should be considered attractive to invest into (CP2). The investor from Red Angels also points out the ***tax regulations*** aspect and points out that it should be more advantageous for investors to invest directly in a startup not only via funds, due to that he deemed the ecosystem to be medium in terms of attractiveness of investment (IE1). Lastly the respondent from ISCTE states that he is unsure whether necessarily the local entrepreneurship ecosystem is attractive to invest in, however he certainly sees that there are ***interesting perspectives for investors*** to invest into certain startups within the local ecosystem (UP1).

- ***Estonia***

The several of the Estonian startup founders agree, that the Estonian ecosystem ***has become attractive for investors*** and they do confirm that the reason for it is largely ***the visibility that has been attained*** due to a number of very successful startups that have merged from the local ecosystem her (EE1, EE3).

As per what was outlined in the last paragraph about Portugal by one of the local respondents, an Estonian investor confirms that as a whole, entrepreneurship ecosystems are not invested into, but rather specific ventures in an ecosystem can be invested into. She continues by saying, that the investments into the startups are increasing and the companies are expected to grow to be increasingly international, however she does see that certain activities and monetary proceeds in case of exits will be leaving Estonia due to the limited supply of local workforce and funding (IE1).

Similarly to Portugal, the one of the investors mentions that in the region Estonia is present in, ***a certain degree of creativity and resilience is emergent***, as there are few resources at hand, but regardless of it the entrepreneurs are still able to build their products and also to establish their first commercial success, which is something that is appreciated by the investors (IE2). The Startup Estonia representative continues the same thought by saying that the Estonian character of stubbornness and a strong sense of duty has been transferred into the local startups. She adds that their attitude in terms of how their businesses are built and run is solid and is as such widely liked by the investors. Additionally, she does point out, that as it was with the case in Portugal, she deems that also investing into the Estonian ecosystem could be simplified and

she does suggest that potentially the Estonian digital society and the e-residency for instance could further facilitate this process (PE1).

Lastly, the respondent from one of the large corporations in Estonia, does point out that unfortunately the Estonian ecosystem is still *somewhat of a periphery for the investors*, as they are generally more used to doing business in London or the Netherlands for example and it does become an issue, as therefore the companies may find themselves in a situation, where they need to register their juridical office abroad. This demonstrates that the foreign investors do have a certain degree of insecurity in terms of investing into the Estonian entrepreneurship ecosystem. He does conclude however by saying that in the end of the day, it is ideas that are being invested into and if needed, then the startups will make the necessary juridical or otherwise needed adjustments accordingly (CE1).

4.4. Summary

As a result of the interviews conducted extensive data was collected, duly analyzed and the findings from the interviews presented in the chapter above. Based on the findings in-depth understanding and practical knowledge as to how the actors perceive entrepreneurship ecosystems was obtained. Firstly, the findings helped to overall understand how the actors of the ecosystems in Portugal and Estonia comprehend the overall concept of the relevant ecosystems. Similarities with the findings from the literature review can largely be noted, however as a result of the interviews the central points of emphasis relating to the term was discovered. The key words of community, interconnectedness, all the relevant actors and the applicable supportive measures were mostly highlighted. It was also established that the respondents were in unanimous agreement regarding the entrepreneurship ecosystems being highly relevant for all the actors operating within them and that a favorable entrepreneurship ecosystem can certainly assist a great deal in bringing good and innovative ideas into life.

In terms of the actors that operate within ecosystems based on the findings of the literature review, the respondents largely agreed with the theoretical framework and found it to be of relevance with only some small exceptions. As was the case with the overall concept, once again, the interview findings helped to find the right points of emphasis regarding the specific relevance of the actors. In terms of additions to the actors proposed based on the literature review, the respondents proposed to add incubators/accelerators, mentors, customers and media into the categories as well.

As it has been already previously noted, the key drivers of favorable entrepreneurship ecosystems have been the central focus from the very first stages of the dissertation writing process. The interviewees provided their unique insights regarding these drivers as well as opined on the concepts outlined in the literature review in an extensive manner. The research findings have validated many of the observations made based on the literature review and also helped in a significant way to provide solid answers to the research questions posed, which will be further elaborated on in the following chapter. The data that was obtained helped to determine the key aspects of a favorable entrepreneurship ecosystem and means how to strive for it.

Regarding the specific interactions within the entrepreneurship ecosystems, the respondents did provide data of value. It was established that the unique connections between the different actors within the ecosystems are deemed to be by most respondents as the critical success factor. When it comes to how favorable ecosystems can come into being, the opinions of the respondents were largely split between the building, evolving and hybrid approach. Essentially, it can be concluded that in the process of the emergence of an entrepreneurship ecosystem, at different stages different ways of coming into being are applicable. All the respondents also widely agreed that the enhancement of a favorable entrepreneurship ecosystem should certainly be seen as an economic development strategy and encouraged the policy-makers to always keep that in mind.

The author of the dissertation was fortunate enough to obtain access to some of the key actors operating within the entrepreneurship ecosystems in both Portugal and Estonia. As such, data of crucial importance was received from these actors directly. Based on the research findings it can be concluded that many similarities between the ecosystems of the two countries exist, however a degree of some significant differences has been identified as well. The similarities can be noted regarding the following themes: the existence a qualified and appropriate talent pool; the right kind of driven attitude and mindset among the actors within the ecosystems; the enhancing visibility that has brought the two countries onto the European startup map; the notable affordability of both countries. Largely the respondents also agreed that the ecosystems in scope of this dissertation can be considered as rather active and dynamic. Due to the small sizes of the local markets, the entrepreneurs in both countries must embrace the approach of going-global-from-day-one. Additionally, similarities, but more from the negative side are the fact that the actors do feel as if both countries should establish a more clear vision, in terms of

where they want to head to going forward with the local entrepreneurship ecosystems on a governmental level.

In terms of differences, the advantages of the Portuguese geographical location and the quality of the relevant infrastructure was found to be more dominant, whereas Estonia's somewhat peripheric location can be deemed an obstacle in terms of visibility and potential investments. It can also be noted, that in Estonia, the country as a whole can be deemed as one ecosystem, whereas in the case of Portugal significant asymmetries between the different regions of the country have been identified and as such a number of respondents were of the view that the country cannot be deemed as one entrepreneurship ecosystem. A key advantage in terms of the Estonian ecosystem was deemed to be the quality mentorship available, whereas in Portugal this was deemed to be something that was somewhat lacking, at least in a structured manner. It was also concluded by the respondents that the entrepreneurship ecosystems of both countries and the startups emerging from there are rather attractive in terms of investments and that is in many ways thanks to the fact that the visibility of both ecosystems is constantly increasing.

The ways in which all the relevant research findings have been put into use in the process of providing the answers to the research questions posed will be outlined in the following chapter.

5. DISCUSSION OF THE RESEARCH RESULTS

5.1. Introduction

As previously outlined in the chapter “Methodology”, prior to launching to the process of writing the dissertation research objectives were set and based on those, three research questions were formulated. The research questions can be considered as a guidance, that is to be followed throughout the completion of the master thesis. The following chapter presents the results based on the research findings shown in **Chapter 4** and the respective analysis performed.

5.2. Answering research question #1

Research question #1 has been formulated as follows: „ What are the key drivers of a favorable entrepreneurship ecosystem? “

In order to be able to provide an answer to research question #1 of this dissertation, at the first stage, conclusions were drawn based on the initial key driver proposals made by the respondents. Secondly, the views about the key drivers identified based on the literature review will be brought out. Lastly, a synthesis of the respective data as a whole is presented.

As it can be seen in the literature review of the relevant themes and based on the research findings presented, there are many different approaches to the overall concept of entrepreneurship ecosystems. Surely a certain degree of commonalities between the theoretical and practical approaches can be found, but also some unique and at times surprising findings can be discovered when interviewing the actors actively operating within specific entrepreneurship ecosystems. It is important to note here as well that the respondents unanimously agreed that a favorable entrepreneurship ecosystem is of key importance for all of the actors within the ecosystem and the supporting environment of it is essential for startups to be built. A well-structured entrepreneurship ecosystem helps the entrepreneurs with good products to succeed, and such an environment, as a result, drives innovation and value generation (EP1, CP2).

5.2.1. Key drivers as per the interviewees

Firstly, based on the information obtained and analyzed, on a high level, the key driving force of the entrepreneurship ecosystem is the *specific kind of mindset and attitudes*, that comprise

of the necessary *openness, willingness to take initiative and bear risks, to drive innovation and to build the relevant networks*, which then enables the *right kind of culture* that dominates the respective ecosystem to emerge (EE1, IP2, CP2). This culture that should emerge as such, should be *embracing innovation* and have the *willingness and incentive to collaborate* among the various different actors operating in the respective ecosystem (IE1, PE1, IP1, CP2) It was also pointed out that a degree of *healthy competition* among the entrepreneurs drives the ecosystem forward (IP2).

As it can be seen on **Figure 4** in subchapter 4.1.1., the most commonly used term in the interviews held, when talking about entrepreneurship ecosystems, was *community*. This means that the result of all the collaboration between all the actors of the entrepreneurship ecosystem and the influence and unique combination of the key drivers/elements/pillars present in the ecosystem create *synergies* that are specific only to the local ecosystem. The degree to which the actors and elements are *connected to one another*, greatly determines the favorability of a specific entrepreneurship ecosystem, therefore the term *interconnectedness* would be of critical importance as well. Several of the interview respondents did highlight the crucial aspect of the having a high interconnectedness that is required between the actors within the ecosystem to increase the probability of successful startups emerging and that these interactions in fact are key to laying the foundation for success in the overall entrepreneurial environment (IE2, EE2, IP1, IE1, UP1). To further this idea, several of the respondents also outlined the fact that the *active levels of engagement* of all the actors of the ecosystem are essential in order for the aforementioned levels of interconnectedness to be achieved (PE1, CP2, IP1, IE1). In order for these kind of solid connections to be formed, networks established and culture to be developed, time is of the essence, as it was concluded by several interviewees that in order for their local ecosystems to demonstrate increased favorability, time needs to pass in order for the relevant environment to mature (EE1, EE2, EP1, CE1).

The themes presented in this answer so far demonstrate the more abstract and high-level aspects, this so to say X-factor that an entrepreneurship ecosystem should possess in order to become favorable. From a more specific and factual perspective, the respondents did highlight the relevance of the *actors themselves*, each one of them having their own specific role (IE1, IE2). As per a majority of the respondents, a critical mass of actors with the right kind of mindset can impact the ecosystem in a major way (IP1, EP2, IP2, CE1). Additionally, at least in some way, all the respondents did bring out the overall importance of the existence of a

talent pool with the relevant skills required for the specific ecosystem. It was largely agreed as well that the *central figure and the focus of the entrepreneurship ecosystems should be the entrepreneur, as they are the ones who bring about change with their innovations and ideas* (IE1, IE2, EE2).

All of the other actors, the pillars and domains presented are deemed of importance and based on the interviews conducted a broader theme that was frequently highlighted was the existence *supportive measures, facilities and infrastructure* that are of high quality, essentially, these the elements that the respondents considered to be important to for the entrepreneur to be able conduct their ventures with ease in an efficient manner and have any considerable obstacles on its way removed. In terms of actors, what was particularly frequently mentioned was the mentorship aspect (EP1, IE1, PE1, EE2), the availability of *structured and experienced mentorship* was deemed essential by most founders interviewed. From the mentorship onwards, also many respondents did point out how inspirational and useful it can be for the startup founders to have role models that come from the same ecosystem they are operating in (EP1, EE3, PE1, EE2, IE1, IE2). The *role models* can often become the people who take on various roles in the advancement of the ecosystem by becoming serial entrepreneurs, investors/business angels themselves, serving as mentors or overall being active in engaging in the activities of the local entrepreneurship ecosystem. In addition to the people providing support, the respondents did also bring out a variety of aspects in terms of *supportive infrastructure and facilities, for structured and high-quality incubation and in particular acceleration opportunities, existence of experienced and good quality service providers*.

It is clear that entrepreneurs certainly need the availability of the necessary *funding and finance* in order to bring their innovations and ideas into life, but perhaps somewhat surprisingly, this was of course something that was mentioned by a large majority of the respondents, however, it was not something that was particularly often highlighted as a main feature, it was taken more as a matter of fact aspect and based on the interviews the focus was still more on the people and synergy aspects of the entrepreneurship ecosystem. It is to be pointed out however that the respondents from both countries were mostly of the view that the ecosystem, as a whole, could certainly scale in a more rapid manner if funding were to be increased, especially from an international point of view (EP1, IP2, IE2, CE1, CP2).

In terms of the aspects of education, the role of the universities was deemed as relevant by most, however there were respondents who did state that their role is at times given too much

importance (IE2, EE3). A rather significant role they do play that was highlighted was in terms of the research & development work they do and as such the *cooperation between the startups and the research & development departments of universities* should be enhanced in order to support the innovations generated by the universities to be brought into the markets (CP2, IE1). Quite many of the respondents, particularly in Estonia did also point out that the *process of educating an entrepreneur and teaching the right kind of entrepreneurial culture should start much earlier than in the university, rather already in elementary or middle school* (UE1, IE1, EE2, PE1).

In terms of the role of the government and the regulatory framework, most of the respondents brought up the need for the creation of a favorable environment in terms of ease of doing business by creation of the *appropriate business, innovation, tax, labor and immigration legislation* (IE1, IP1, IE2, CE1, CE2, EE1, EE3). It was also mostly agreed among the respondents that the role of the government should largely be to assist in the creation of a favorable ecosystem, but that for many meant that it would be about not standing in the way of doing business and helping to remove the obstacles the actors within the entrepreneurship ecosystem might be facing (EE1, EE3, EP1, PE1).

As per what has been outlined in the theoretical framework, particularly based on the key drivers as identified in the WEF 2014³⁷ survey, the *accessible markets*, was the pillar of deemed to be of the highest importance based on the respondents of the survey. The interviewees approached for the purposes of this dissertation did outline of course the need for a market and particularly in the cases of the rather small markets of Portugal and Estonia, that going global from day one is the approach any entrepreneur should have in the process of creating their startup. However, when identifying the key drivers of a favorable entrepreneurship ecosystem *only a few of the respondents mentioned customers as one of them* (EE2, EP2).

Lastly it is worth mentioning that a few of the respondents did outline that surely the key drivers as in the pillars/domains/actors can create the needed pre-requisites for success, however they did mention that for instance in the case of Estonia, *chance* has played a role in the emergence

³⁷ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

of a favorable ecosystem as well – the right things happening at the right time, with the right people (CE1, EE3).

5.2.2. Key drivers as per the World Economic Forum (2014)³⁸

In order to ensure to have a framework and a foundation to build this dissertation on two central approaches regarding the key drivers of entrepreneurship ecosystems were reviewed, presented and the understandings of these approaches by the actors interviewed were thoroughly analyzed.

The first source for the key drivers was the *World Economic Forum report “Entrepreneurial Ecosystems Around the Globe and Early-Stage Company Growth Dynamics”* (2014). As mentioned previously in subchapter 2.4.1, the eight pillars presented in it (also on **Figure 1** of this dissertation) were based on extensive research performed among the entrepreneurs themselves on a global scale.

To some degree or another, all the respondents interviewed, agreed that the pillars presented are relevant, actual for entrepreneurship ecosystems. In terms of prioritization or order of importance, the actors proposed different setups. From the perspective of the entrepreneurs interviewed, they did deem the pillars of *accessible markets*, *quality human capital* and the right kind of *support systems* to be essential for their activities. Certainly, another aspect that was often mentioned was the *funding*. This seems to be a challenge that the founders are often faced with and particularly in the cases of Estonia and Portugal, where the local markets are relatively small and hence not a great deal of funding opportunities are present, finding the financing for the products/services is of significant relevance for the entrepreneurs. One of the investors summed it up rather well by concluding that in her view, the key pillars of an entrepreneurship ecosystem should always be *the people, the ideas and the capital* (IE2). Probably the best way to conclude the theme of the WEF pillars part here is to highlight what was pointed out by one of the Portuguese respondents, that indeed the pillars are essential, however the pillars are to be *established in a manner that allows for them to be easily adapted into the local settings of the entrepreneurship ecosystem* (UP1).

³⁸ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

5.2.3. Key drivers as per professor Daniel Isenberg (2011)³⁹

If the WEF (2014)⁴⁰ approach and proposal of the pillars were drawn based on a large-scale survey, then another theoretical framework created, that has a great deal of significance has been proposed by professor Daniel Isenberg (2011), in which he maps out *the six domains of entrepreneurship ecosystems as the key drivers*. Once again, a majority of the respondents did agree that the *domains presented are in large part very much to the point and can benefit a great deal into creating the synergies needed for a favorable ecosystem to emerge*. Investor One of the investors does highlight that *merely the removal of one domain would already make it extremely challenging for a successful ecosystem to be a well-functioning one*. Several of the respondents did particularly focus on the *conducive culture* aspect of Isenberg's proposed domains (2011), as this has been deemed something of a key ingredient of a favorable environment in terms of entrepreneurship and particularly startup entrepreneurship. The ISCTE professor would slightly adjust the term and proposes instead for the domain to be called a *cooperative culture* to better reflect the fact that the central role in the ecosystem should be played by the *collaboration and interconnectedness* of the actors (UP1). Culture does drive behavior and as such, it is absolutely essential as per the respondents interviewed for the purposes of this dissertation. Several of the respondents did outline Isenberg's (2011) approach as being less practical than the WEF (2014) approach, but did confirm that the essentials are covered. The representative of one of the Estonian large companies does point out that although Isenberg's (2011) domains are relevant, in his view the domains and the WEF pillars have not covered the *drive for entrepreneurship*, which in his view should be the essence of an entrepreneurship ecosystem (CE1).

5.2.4. Conclusions

This subchapter is concluded by **Figure 10**, which serves as the representation of a synthesis of the key drivers of entrepreneurship ecosystems based on the literature reviewed and the findings of the interviews conducted for the purposes of this dissertation.

³⁹ <https://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/#761a02c75fe8>

⁴⁰ <http://reports.weforum.org/entrepreneurial-ecosystems-around-the-globe-and-early-stage-company-growth-dynamics/wp-content/blogs.dir/34/mp/files/pages/files/nme-entrepreneurship-report-jan-8-2014.pdf>

Figure 10 - A synthesis of the key drivers of a favorable entrepreneurship ecosystem

Synthesis of the key drivers based on the literature review and the primary research findings		
WEF (2014)	Isenberg (2011)	As per the interviews
Cultural support	Conducive culture	Cultural aspects: The culture that fosters openness, risk-taking and healthy attitudes towards failure. This culture is brought into life by the right mindset that the entrepreneurs must possess in order to take initiative and drive innovation and change. This can be further enforced by the good role models present in the ecosystem.
Human capital/workforce	Quality human capital	Talent pool: The existing talent pool and a critical mass of driven entrepreneurs.
Support systems/mentors	A range of infrastructural support	Support systems: Supporting infrastructure and facilities to put the ideas into practice. Particularly relevant the aspect of structured mentorship.
Funding and finance	Availability of appropriate finance	Funding: Appropriate financing is certainly relevant in order for businesses to be able to scale.
Education and training/Major universities as catalysts	-	Education/Universities: Importance of quality education, starting from already elementary and middle school and continued at the university level. The research & development departments' collaboration with the startups is key in putting the innovations into practice and launching them to the market.
Government and regulatory framework	Enabling policies and leadership	Government and regulation: The creation of a supportive and favorable economic and legal environment (ease of doing business, labor, tax and immigration legislation).
Accessible markets	Venture-friendly markets for products	Markets: Customers as an important part of the ecosystem.



Key additions based on the primary research conducted
The importance of interconnectedness and the level of engagement among the actors of the ecosystem
Key success factor is the collaboration between the actors in an open and efficient manner , which can be further enhanced by a certain degree of healthy competition among the actors.
Time and chance have their role to play in the development of a truly favorable entrepreneurship ecosystem.

Source: WEF (2014), Isenberg (2011), interview data compiled by the author.

5.3. Answering research question #2

Research question #2 has been formulated as follows: “How have Portugal and Estonia fared with regards to these drivers?”

As it was established based on the literature review, no clear consensus as to how to measure entrepreneurship ecosystems has been reached. Hence, for the purposes of conducting the empirical part of this dissertation, the approach was taken to obtain primary data from the actors operating in the entrepreneurship ecosystems selected into the scope of this master thesis. Based on the data collected and the insights received, an outline of how Portugal and Estonia have fared in terms of the key drivers of a favorable entrepreneurship ecosystem will be outlined. The findings are presented as per the categories established in the answer of research question #1.

5.3.1. Portugal

- ***Cultural aspects***

From a cultural perspective, a large majority of the respondents, agreed that the entrepreneurship ecosystems in Portugal indeed have the right kind of mindset and approach. The development of this kind of entrepreneurial mindset can be considered as a result of the fact that the Portuguese have had to be creative in many ways to make things happen with very few resources (CP1, EP1). In addition to the aforementioned, due to historical reasons already, a culture of openness has been fostered and international connections valued (EP2, CP1). A culture of open communication has been also considered as strength along with the fact that the actors present in the ecosystem have a good command of foreign languages and a willingness to put it into use (EP2, CP1).

Regarding the aspects that are perhaps not as favorable regarding the kind of culture that would foster entrepreneurship, it was established that the approach as to how failure is perceived in the society is something that should change in order to foster the development of the local entrepreneurship ecosystems (PP1, UP1). In the startup world failure is an important factor, that provides the entrepreneurs with experience and enables them to learn and grow as such.

- ***Talent pool***

The talent pool in Portugal was widely praised by the majority of the respondents. It was highlighted that world-class talent is available in the Portuguese entrepreneurship ecosystems: motivated, innovative and highly creative entrepreneurs are present that want to make their impact (CP2, IP2). Additionally, it was outlined by several interviewees that the Portuguese ecosystems provide access to high-quality labor force at affordable prices (CP1, EP2).

- ***Support systems***

In terms of support systems, it was pointed out by a number of respondents that although certain steps have been taken in order to establish a strong support system, there is still a long way to go. From the founders' perspective, it was highlighted that there is certainly a need for significantly more opportunities of receiving structured mentorship and creating quality incubators and accelerators (EP1). It was also outlined by several interviewees that in the Portuguese entrepreneurship ecosystems, there is still not yet a critical mass of home-bred success stories, that could inspire and give back to the community in a significant way (EP1, EP2).

- ***Funding***

As the Portuguese market overall is relatively small and the ecosystems are quite young and still in a development stage, then certainly increased funding & financing could assist in scaling the businesses operating in the ecosystem significantly. From the investors side it was outlined that currently there is very limited access to risk capital, and this is certainly a development area for the ecosystems of Portugal (IP1, IP2).

- ***Education/Universities***

All the respondents interviewed commended the high quality of the education provided by the Portuguese education system and particularly the universities.

- ***Government and regulation***

In terms of the role of the government and the regulations applicable to the entrepreneurship ecosystems, some of the respondents did point out that the authorities should establish a more clear vision, in terms of where the local ecosystems are headed, what is to be achieved and how

it should be done (EP1). From the investors perspective, the aspect of developing legislation to provide incentives for investors to engage more in the local ecosystems (IP1). Another aspect mentioned was the fact that the subsidies provided to the entrepreneurs should be revised, as currently it is seen by some as being something, that is too easily attained and as such is causing the over-fertilization of startups (EP2).

As it was also outlined previously in the chapter of research findings, the interviewees had different interpretations as to whether Portugal as a country should be seen, as one entrepreneurship ecosystem or should certain locations be looked at separately. Most of the respondents who sided with the split approach did confirm that the Lisbon ecosystem is the strongest in the country. It was outlined that the success story of Lisbon as an entrepreneurship ecosystem is largely due to the good public policies that have been put into place to foster it and that the other ecosystems in the country should follow suit (UP1, PP1).

- ***Markets***

As the country is small, so is the market the entrepreneurs can offer their products and services to. This can be considered as a disadvantage as it makes it challenging the startups to truly scale in their home market, however, the upside of it is, that this puts them in a position where they have to “*go global from day one*”, hence having a global vision for scaling from the very first stages of developing the business idea (EP1, IP2, UP1).

- ***Interconnectedness***

One of the key strengths of the Portuguese entrepreneurship ecosystems as per the respondents was the fact that the ecosystems have established themselves as strong communities that foster quality relationships and demonstrate a solid level of interconnectedness between the various different actors operating within the communities.

- ***Collaboration***

Although the level of overall networks and communication among the actors was largely deemed to be an asset of the Portuguese ecosystem, several of the respondents did point out that the local entrepreneurship ecosystems could benefit from enhanced collaboration between the actors, particularly for instance when it comes to large corporations cooperating with

startups. Steps in that direction have been taken by some of the more innovative and open big players, however there is still much work to be done (CP2, CP3).

- ***Time/chance***

The local entrepreneurship ecosystems in Portugal are still deemed to be relatively young and in the early development stages. Time is needed in order to allow for all their strengths to fully blossom and for the weaknesses to be improved on. When speaking about the aspect of chance, perhaps what is worth mentioning here is that this strong focus on fostering entrepreneurship ecosystems in Portugal was kickstarted by the recession of 2008 as unemployment was at high levels and people did have to find creative ways to get by. Hence this unfortunate event did end up kickstarting a process, which has led Portugal to become a popular entrepreneurship ecosystem in the context of Europe and the world (UP1, CP1, EP1).

5.3.2. Estonia

- ***Cultural aspects***

The interview respondents largely saw the cultural aspects of the Estonian entrepreneurship ecosystem as being solid and relatively supportive. The right kind of mentality and global-first mindset is something that is seen as a strength of the local ecosystem (PE1, IE1, IE2). The entrepreneurial culture is inspired by the massive success stories of Skype, Transferwise etc. and the culture of embracing entrepreneurship is something that is supported even on the government level (IE1, EE1, IE2, PE1). As a downside, several respondents did note that the legacy mindset from the Soviet times is something that the ecosystem is still at times battling with (EE2).

- ***Talent pool***

It was mostly agreed by the interviewees that in Estonia, there are possibilities to have access to the right talent pool with relatively low costs. However, due to the very small size of the country, there is a limited supply of experienced workforce and a shortage of talent and its continuity (IE1, PE1).

- ***Support systems***

In terms of support systems, the interviewees did outline that they do feel that a rather significant level of supporting infrastructure and facilities have been created. The big success stories that have emerged from the Estonian ecosystem have certainly served as a source of inspiration and enabled for serial entrepreneurs to emerge and also high-quality mentorship and investment to become available for the new ventures. As a downside, it was pointed out that a lack of a supportive environment/infrastructure to bring in talent from abroad is still something that needs to be improved (PE1, EE2).

- ***Funding***

As it was also the case with Portugal, the Estonian respondents also widely agreed that one of the biggest downsides of the Estonian entrepreneurship ecosystem is the fact that there is a shortage of funding and limited local venture capital available.

- ***Education/Universities***

Several of the respondents outlined that in order for entrepreneurs with the right mindset to come about, the supportive education should start as early as possible, hence not only in universities but already at an elementary or middle school level. Certain steps in the Estonian ecosystem have been made towards it, but the respondents did outline that this is something that could be further enhanced (UE1, PE1, EE2, IE2). From the universities perspective, it was also pointed out that early stage prototyping and the commercialization of intellectual property should be further supported, which would make it easier for the researchers and startups to innovate and bring their ideas in the form of products and services into the market (IE1).

- ***Government and regulation***

A number of respondents did comment the Estonian government on what has been achieved so far in the local entrepreneurship ecosystem. However, it was noted by some that a clear vision is to be established regarding where the ecosystem should be headed next, in order to ensure to maintain momentum and remain relevant as an entrepreneurship ecosystem (CE2, IE2). In terms of legislative matters, it was mentioned by a number of respondents, that the tax laws could be more supportive in terms of investments and labor costs and also the immigration

policies could be enhanced to attract more foreign talent into the ecosystem (EE1, IE2, CE2, PE1).

- ***Markets***

The Estonian home market is small and as such it is very difficult to truly test the new innovative products and services onsite. Therefore, as it was also the case with Portugal, the Estonian entrepreneurs must have the “*going global from day one*” mindset in any venture they are undertaking in order to be able to scale their businesses (IE1, IE2, CE2, PE1, EE2).

- ***Interconnectedness***

All of the actors of the Estonian ecosystem did highlight the fact that the local entrepreneurial community is active dynamic and very well connected both onsite, but also on a global scale, which is largely as a result of the success stories that have to a certain degree paved the way for the Estonian startup entrepreneurs to receive increased visibility and get in touch with the large global players (EE3, IE2, PE1, CE1, EE2).

- ***Collaboration***

Although as per the previous paragraph there is a strong level of interconnectedness among the actors within the Estonian entrepreneurship ecosystem, the aspect of collaboration is something that is there at a fair level, however by the respondents interviewed for the purposes of this dissertation, they do suggest that it could be further enhanced, particularly when it comes to the cooperation between the large companies and the startups, as for now most large companies are rather passive and not as open towards innovation yet (CE2).

- ***Time/chance***

Although the Estonian ecosystem can be deemed as being somewhat more mature than the Portuguese ones, there is still significant room to grow. The a number of big success stories have emerged from the Estonian entrepreneurship ecosystem and they have started to give back to the ecosystem, the next wave of entrepreneurs who already have reaped the benefits of a more favorable entrepreneurship ecosystems are emerging and it will be very interesting to see what kind of innovations come about as a result, in order to get everything “right” time is of the essence to allow for the changes to occur (EE1, EE3, IE2). Lastly, in terms of chance, it could be stated that it has played a big role in the development of the Estonian entrepreneurship

ecosystem as the country has gone from being a small post-soviet country with hardly any resources to the startup hotspot that it is today.

5.3.3. Conclusions

The above subchapter served as a representation of how the ecosystems of Portugal and Estonia have fared in the light of the key drivers of favorable entrepreneurship ecosystems. It can be concluded that a lot of the critical elements for success are present in both countries and many of the areas of improvement are appearing due to the fact that the ecosystems can be deemed as being still in the development stage, Estonia having advanced a bit further and Portugal being somewhat younger, however growing in a rapid manner. It can be also concluded that the key success drivers in both of these cases have come into being due to the unique qualities the specific ecosystems possess, the specific of which will be further elaborated in the following subchapter, which provides the answer to research question #3.

5.4. Answering research question #3

Research question #3 has been formulated as follows: “What has caused these two countries to emerge as startup hubs?”

The answer to research question #2 outline how the two countries within the scope of the research conducted for this dissertation have fared in terms of the key drivers of favorable entrepreneurship ecosystems. The answer to research question #3 will aim to provide some further insights as to what the causes for Portugal and Estonia to have been launched on the world’s startup maps, are. It is worth outlining here that as per the data collected and analyzed there was no clear consensus as to whether ecosystems can or should be built, should they rather be built or is the emergence of a favorable entrepreneurship ecosystem caused by a hybrid of these two means. It was however very well described by one of the respondents in Estonia, that the starting point of any entrepreneurship ecosystem’s emergence, should be the agreement made in the society, among the relevant actors, as to what is to be achieved with establishing the ecosystem and by which means it should be done. This largely captures the need for the drive and willingness of the actors to create a favorable environment for all the counterparties and from there on based on the synergies created the ecosystem lives its dynamic and evolving life (CE1).

5.4.1. Portugal

It was confirmed by several respondents that in Portugal the development of favorable entrepreneurship ecosystems did start out as a strategy to enhance economic development, however in time the ecosystems have continued to grow on their own and for some time already without an overarching economic strategy in mind (IP2, EP1, UP1).

A key factor that most of the Portuguese respondents outlined in terms of what makes the Portuguese ecosystems unique was the *excellent geographical location of the country*. *Well-developed infrastructure* is in place and as such can be conveniently approached. Due to the location also, the country is in a relatively *convenient time zone* for both the Americas and Europe. The country as a whole, but Lisbon in particular, has been commended on the *cool ambiance* of the city and the excellent conditions for working and living, which appeal to both the local and foreign founders and other actors of entrepreneurship ecosystems (IP2, EP2, EP1, UP1). In addition to the aforementioned, it was frequently also outlined that establishing one's business and having a good quality of life is rather affordable in Portugal, which is particularly appealing for the foreign actors interested in launching their idea somewhere (CP1, EP1, UP1, EP2).

These unique aspects of the Portuguese ecosystems, in combinations with the key drivers outlined in the answers provided to the previous research questions, have enabled for the *visibility of the country* as a whole in relation to entrepreneurship ecosystems to increase (EP1, EP2, UP1, IP1). The visibility of a specific entrepreneurship ecosystem can significantly be improved by the success stories that have emerged and as such many respondent did bring out *Farfetch* as one of the startups that has drawn a significant amount of attention to Portugal. In the specific case of Lisbon, the fact that for several years already *Web Summit*, the world's largest technology conference is taking place there, has proven to be invaluable. This of course has also been greatly *supported by the Lisbon municipality*, as several respondents have outlined that in fact the entrepreneurship ecosystem has been built and the legislation enforced has greatly supported it (UP1, PP1). As a result of the visibility obtained, investments tend to increase as well. As per one of the respondents, who is a part of the startup that operates in both the Estonian and Portuguese entrepreneurship ecosystem, has stated that in his view, Portugal, at this point in time, is in fact *one of the most attractive entrepreneurship ecosystems to invest into in Europe, if not in the entire world* (EP2).

5.4.2. Estonia

As per a majority of the respondents from the Estonian ecosystem, the governments' role so far in terms of furthering the local ecosystem has been positive. In particular, initiatives such as establishing a framework for *startup visas* and *e-residency* can be considered as a rather unique and positive aspects (PE1, CE2, IE2, EE2). However, in order to ensure that the ecosystem does maintain momentum, the several respondents did point out, that the government should formulate a *clear vision* in terms of how to go forward and to find the country's own unique niche in the rapidly changing world of startups (CE2, EE3, IE2).

A consensus among the Estonian respondents was that probably the most unique aspect of the local ecosystem is the fact that quite a significant number of successful startups (especially when taking into account the small size of the country) have emerged from it. *The impact Skype, GrabCad, Transferwise, Starship Technologies, Pipedrive and many other have had is indeed invaluable*. This can be very well described as a classic example of a *spill-over effect* that has occurred within the ecosystem. Due to these massive success stories, Estonia has significantly *increased its ecosystem's visibility and thanks to it, worldwide relevant contacts and networks have been established* (CE1, CE2, IE2). Due to the increased visibility and the positive reputation of entrepreneurs from Estonia, there has also been a rather significant *increase in terms of the investments received* and that particularly on a more international scale (IE1, IE2). The positive role models/success stories and the amounts of new investments received have then an impact on the next generation of local entrepreneurs emerging (EE1, IE2). Lastly, an aspect mentioned by many of the Estonian respondents related to the fact of how Estonians do business. With their rather *stubborn, non-nonsense approach, resilience and a strong sense of duty*, the entrepreneurs from Estonia run their business in a solid and efficient manner and this is well-liked by different actors of the ecosystems and in particular foreign investors (IE1, IE2, PE1).

5.4.3 Conclusions

To conclude, the above paragraphs outlined the unique aspects that have enabled for the ecosystems of the two countries in the scope of this master thesis to emerge as attractive and favorable entrepreneurship ecosystems. This to a degree is a testament to the fact that although specific drivers of favorable entrepreneurship ecosystems can be mapped and a supportive environment by them created, there are always unique aspects of specific locations that must be accounted for when assessing the success stories of favorable entrepreneurship ecosystems.

6. CONCLUSION

6.1. Conclusions, implications & a teachable point of view

The focus of the dissertation was the emerging concept of entrepreneurship ecosystems. The aim of writing this thesis was to obtain an understanding as to what drives the success of such ecosystems, how can such ecosystems come into being and to provide insights as to what has driven the success of the Portuguese and Estonian entrepreneurship ecosystems. In order to fulfill the aim set, as a first step, the key drivers of favorable entrepreneurship ecosystems were determined based on the literature review and the interviews conducted. Secondly, the specifics of the two ecosystems in scope were researched and analysis was performed about how these ecosystems have fared in the light of these drivers and what has caused for them to emerge has favorable environments - all based on the relevant data accessed.

In order to ensure adherence to the aim of the dissertation and to set the focus of the research performed, three specific research objectives were set. The following paragraphs will outline how these objectives were fulfilled during the process of writing this dissertation.

Firstly, the chapter of research findings provides a description and an analysis about how the actors operating within the ecosystems selected into the scope of this master thesis perceive the concept of entrepreneurship ecosystems, as a whole and more specifically, the actual environments they themselves are operating in. Based on the analysis performed, it was established that the most common themes outlined by respondents were the existence of an active and engaging community within the ecosystem, where the actors have a strong interconnection to one another. The other measures that were found somewhat secondary, but still of high importance were the presence of the actors themselves and various types of supportive measures, facilities and infrastructure. In terms of how the actors perceive the specific ecosystems they are operating in, for both countries the feedback in terms of evaluation was overall a rather positive one. It is worth mentioning that overall, the Portuguese review their ecosystems in a more positive light than the Estonian respondents.

Secondly, it can be concluded that as a result of the research and analysis performed during the course this dissertation, the key concepts and drivers of a favorable ecosystems have been duly identified and established. A synthesis of the key drivers outlined in the literature review and the drivers per the respondents' answers was made. As such it can be concluded that the most

significant drivers for a favorable entrepreneurship ecosystem based on the answers received are as follows:

- *A certain set of cultural aspects that foster entrepreneurship;*
- *The existence of a high-quality talent pool;*
- *A well-structured support system;*
- *Relevant funding opportunities;*
- *Quality education/universities;*
- *Supportive governmental and regulative measures;*
- *A market for the products and services offered by the entrepreneurs;*
- *Solid levels of interconnectedness among the actors of the ecosystem;*
- *A willingness to collaborate by all the actors;*
- *Time that is needed for growth and some degree of chance.*

As it can be derived from the above, most of the themes covered in the literature review, were in some shape or form also found of importance by the respondents interviewed for the purposes of this dissertation. What did stand out, based on all the data obtained, is that although a lot can be done by building and setting up various favorable measures, there still appears to be some aspects at play, which can be at best described as synergy and that is something rather dynamic and particularly location specific.

Thirdly, a determination with regards to how these kinds of favorable entrepreneurship ecosystems come into being has been made based on the cases of Portugal and Estonia. It can be concluded that in the case of both countries the emergence of the ecosystems has been a result of the combination of a number of different variables. In the case of Portugal, it can be concluded that at least at first, the launch of favorable entrepreneurship ecosystems was an economic development strategy outlined by the government. As such different measures were taken in order to foster the creation of a favorable entrepreneurship ecosystem. Portugal's unique appeal appears to be its outstanding location, good quality of life and right kind of culture that embraces innovation and change. Placing the key drivers that are existent in the Portuguese ecosystems into such a location and a success story emerges.

In Estonia's case the government's role in terms of fostering the entrepreneurship ecosystem by various legislative measures and incentives can also be seen. However, the number one unique aspect that has been determined is the huge success stories of startups e.g. such as

Skype, Transferwise, Starship Technologies and the list goes on. This has truly cemented Estonia on the global map of entrepreneurship ecosystems. The spillover occurred as a result has influenced the enhancement of the key drivers needed to further scale the local ecosystem.

A number of observations were made, in terms of what could be considered as the main takeaways or as one might say, the teachable points of view of this dissertation. These have been outlined with keeping in mind what an actor of an ecosystem can learn from. In the first instance it is worth outlining that entrepreneurship ecosystems, as are the ecosystems within nature are active and dynamic beings and as such in constant change and transformation, it is important for the actor to have the willingness to adapt to it accordingly. Secondly, it is the unique interactions and connections between the actors operating within an ecosystem are what essentially create the synergies that help an ecosystem from being good to becoming great, therefore fostering quality relationships and building a solid network is of crucial importance. Thirdly, in order to succeed with one's undertakings, innovative ideas and the right mindset are needed and an openness towards embracing innovations is to be established. Last, but certainly not least, the actor should always take into consideration the specifics of the ecosystem they are operating in. Knowing the strengths and also the weaknesses of a specific can be most beneficial for the actors, as it can help them determine which is the most suitable environment for their activities and as such assist in enforcing their path to success.

This dissertation set out to capture the essence of the driving forces behind favorable entrepreneurship ecosystems and to obtain insights about what has caused countries such as Portugal and Estonia to emerge as globally renowned entrepreneurship ecosystems. Based on the research conducted and analysis performed, it can be concluded that certain patterns can be established regarding the success criteria, however it is also evident, that there is no one simple formula for success and that all of the measures applied must always take into account the unique aspects of the specific location where the entrepreneurship ecosystem is based.

6.2. Limitations of the study

Based on the conclusions outlined above, the research objectives have been duly met. However, as it is the case with the majority of research projects, there is a certain degree of limitations that must be accounted for. The limitations regarding the research performed are as follows:

- Although a considerable number of interviews were conducted, access was not obtained to key public authority/policy-making figures, whose input could have potentially provided

more data about how entrepreneurship ecosystems are perceived on the state level and what the vision from the government's perspective is for the two countries in the scope of this master thesis;

- The qualitative research method chosen did enable for valuable data to be collected and analyzed, however, the addition of applying certain quantitative methods, could have provided further depth to the analysis performed;
- For the purposes of this dissertation, two countries that are rather well-comparable were chosen. The research could potentially be further enhanced by adding other countries with more advanced or less advanced ecosystems into the scope of the primary data collected.

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ANNEXES

ANNEX I - Interview questions for the Portuguese interviewees

- 1) How do you understand the term “Entrepreneurship ecosystem”?
- 2) Is a favorable entrepreneurship ecosystem of importance in your view?
- 3) What do you see as the key drivers of a favourable ecosystem?
- 4) Based on the literature review conducted, the following five actors have been outlined per Aaltonen (2016) as the most relevant actors within an entrepreneurship ecosystem. Do you agree with this setup? Would you add something? Is there something you would remove?

Entrepreneurs; Investors; Large companies; Public Authorities; Universities.

- 5) Based on the literature reviewed, the following findings have been made as to what are the key drivers of a favorable entrepreneurship ecosystem. Do you agree with this set-up? Find them all relevant? Is there anything that is clearly missing?

<u>WEF(2014) Pillars of an Entrepreneurship Ecosystem</u>	<u>Daniel Isenberg (2011) 6 domains of an entrepreneurship ecosystem</u>
<ol style="list-style-type: none"> 1. Accessible markets; 2. Human capital/workforce; 3. Funding and finance; 4. Support systems/mentors; 5. Government and regulatory framework; 6. Education and training; 7. Major universities as catalysts; 8. Cultural support. 	<ul style="list-style-type: none"> • a conducive culture; • enabling policies and leadership; • availability of appropriate finance; • quality human capital; • venture-friendly markets for products; • a range of institutional and infrastructural support.

- 6) Does the fact that the above exists guarantee success? Or is it the interconnectedness/interactions between the actors of these of the essence in your view?
- 7) How can an ecosystem develop? Can an ecosystem be built, or would it rather need to evolve into being?
- 8) What do you think, does the ecosystem require centralized control or should it rather be a self-regulating phenomenon?
- 9) On the scale of 1 to 10, how would you evaluate the development/advancement/level of the entrepreneurship ecosystem in Portugal? Do you consider the country as a whole as one ecosystem or would you categorize some regions separately?
- 10) What do you see as the strengths of the entrepreneurship ecosystem of Portugal? How about the weaknesses?
- 11) What kind of improvements do you think could be made? Whose responsibility is it?
- 12) What makes the entrepreneurship ecosystem unique in Portugal?
- 13) Has a spill-over effect occurred? Do other success stories have an influence on the ecosystem?
- 14) Is the entrepreneurship ecosystem in Portugal attractive to invest into? Why? Why not?

15) The entrepreneurship ecosystem as an economic development strategy, can it be seen as such? Why? Why not?

ANNEX II - Interview questions for the Estonian interviewees

- 1) How do you understand the term “Entrepreneurship ecosystem”?
- 2) Is a favorable entrepreneurship ecosystem of importance in your view?
- 3) What do you see as the key drivers of a favourable ecosystem?
- 4) Based on the literature review conducted, the following five actors have been outlined per Aaltonen (2016) as the most relevant actors within an entrepreneurship ecosystem. Do you agree with this setup? Would you add something? Is there something you would remove?

Entrepreneurs; Investors; Large companies; Public Authorities; Universities.

5) Based on the literature reviewed, the following findings have been made as to what are the key drivers of a favorable entrepreneurship ecosystem. Do you agree with this set-up? Find them all relevant? Is there anything that is clearly missing?

<u>WEF(2014) Pillars of an Entrepreneurship Ecosystem</u>	<u>Daniel Isenberg (2011) 6 domains of an entrepreneurship ecosystem</u>
<ol style="list-style-type: none"> 1. Accessible markets; 2. Human capital/workforce; 3. Funding and finance; 4. Support systems/mentors; 5. Government and regulatory framework; 6. Education and training; 7. Major universities as catalysts; 8. Cultural support. 	<ul style="list-style-type: none"> • a conducive culture; • enabling policies and leadership; • availability of appropriate finance; • quality human capital; • venture-friendly markets for products; • a range of institutional and infrastructural support.

- 6) Does the fact that the above exists guarantee success? Or is it the interconnectedness/interactions between the actors of these of the essence in your view?
- 7) How can an ecosystem develop? Can an ecosystem be built, or would it rather need to evolve into being?
- 8) What do you think, does the ecosystem require centralized control or should it rather be a self-regulating phenomenon?
- 9) On the scale of 1 to 10, how would you evaluate the development/advancement/level of the entrepreneurship ecosystem in Estonia?
- 10) What do you see as the strengths of the entrepreneurship ecosystem of Estonia? How about the weaknesses?
- 11) What kind of improvements do you think could be made? Whose responsibility is it?
- 12) What makes the entrepreneurship ecosystem unique in Estonia?
- 13) Has a spill-over effect occurred? Do other success stories have an influence on the ecosystem?
- 14) Is the entrepreneurship ecosystem in Estonia attractive to invest into? Why? Why not?
- 15) The entrepreneurship ecosystem as an economic development strategy, can it be seen as such? Why? Why not?