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BUSINESS & ECONOMICS

Master Thesis

An Exploration of Portuguese Entrepreneurial Ecosystem: Entrepreneurial Support Organizations and their role in New Projects' Financing

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Abstract

This thesis had as the main purpose to expose and reflect ecosystems' most important players and their key role. While the Portuguese press cites the lack of investment to be a concern of the Portuguese entrepreneurial ecosystem, this study unveils it to be among the least of its concerns. By having opportunity to analyse 27 Entrepreneurship Support Organizations we could identify some patterns, strengths and weaknesses. From 4 core Types of Organizations to Hybrid Organizations and 4 identified Levels of impact on financing, ESOs prove to have a substantial impact on entrepreneurs' performance namely considering conditions to attract/raise investment.

In 5 years, Portuguese ecosystem had an outstanding evolution and has now international leaders on specific areas such as incubation and acceleration. However, the average success rate of projects that are solid enough to be invested by BA's and VC's is still under 3%. At the same time, Portuguese BA's and VC's still have a capital surplus.

Contents

1. Introduction

Regarding to the previous literature on Portuguese entrepreneurial activity one can identify that physical access to Infrastructure and commercial services in Portugal are generally considered to be sufficient for the existent demand. On the other hand, there are still some identified cultural and social barriers that diminish the entrepreneurial potential by a lack of self-employment culture and the existence of high level of bureaucracy and high level of taxes (GEM Portugal 2012). Nevertheless, taking into account (Amorós, Bosma 2014) and namely on Figure 2 Portugal is 11th on TEA[1] indicator among innovation-driven economies[2] with around 8% entrepreneurial activity among adult population (above average). This innovation level was also highlighted by a particular media coverage that has been increasing nationally and internationally, for instance, when Jonathan Moules a Financial Times journalist made a comparison between Lisbon and San Francisco as being twins not only on the surround environment and landscapes but also as being innovation centers for start-up development. Moreover Lisbon was the first European city awarded with EER2015[4] along with the Regions of Northern Ireland and Valencia, which reinforces the efforts of city council of helping to foment entrepreneurial activity. If one take a look on some weaknesses of London tech cluster of Silicon Roundabout that is its cost-of-living which pose big barriers on attracting foreign talent (Sharmila Devi on FT), Lisbon by its way can have a comparative advantage on this respect. Nonetheless, there is still a significant potential of innovation that is not being fully used by Portuguese economy. On a study from Portuguese Ministry of Science (GPEARI/MCTES 2011) it was shown to have more than 17 thousand PhDs in Portugal and just 2.427 PhDs working on private companies which represents less than 15% of total number of PhDs generated by the country till 2009.

Taking into account the existent literature, this thesis tries to establish a deeper analysis of the Portuguese entrepreneurial ecosystem. By having its base of analysis the Entrepreneurial Support Organizations (ESO) behavior it unveils the significant importance of its support activities on financing reality of new projects. In fact, every single support activity that help improve a particular aspect of new projects are ultimately a contribution for the improvement of its investment raising conditions. According to (Rauch et.al 2009) ESO should focus attention on financial results of Entrepreneurs rather than other type of goals Entrepreneurs may intent to pursue. The main

[1] Total Early-stage Entrepreneurial Activity rate – Number of Adult population enrolled on Entrepreneurial activity
[2] See (Amorós, Bosma 2014)
[4] European Entrepreneurial Region 2015

contribution of this thesis is the way one expose each type of organization with a qualitative framework of analysis that categorizes ESO's behavior by type of organization and furthermore by different Levels of impact on financing. This means that every single ESO was rather interviewed or inquired, after the process of data treatment and model development they were finally categorized in different types of Organizations along with different Levels of Impact on Financing. This framework of analysis helped us to tag ESO's most evident strengths and weaknesses along with the most evident patterns that may personify the entrepreneurial ecosystem as a whole.

2. Literature Review

Regarding EU social indicators on entrepreneurial activities one may find a cultural situation that is particularly different from USA and China, revealing a lack of appetence of European citizens. (Flash Eurobarometer, 2012) A majority of (58%) EU respondents would prefer to work as an employee; 37% would prefer to be self-employed. Although it seems desirable for 65% of the people, 67% of the same think it would not be feasible to be self-employed in the next five years. Barely a quarter of EU respondents has started a business or thinking of starting one. Curiously the same portion of respondents says that have taken part in a course or activity about entrepreneurship. We can then identify that there could be a relation between this two factors and if we increase Entrepreneurial Education, we may have more propensity on having entrepreneurial activity. Almost 80% of the enquirers agree that it is difficult to start a business due to lack of financial support. We may argue that probably there is not enough access to information about all the possible financial conditions that currently exists for financing startups or about the programs and organizations that stimulate entrepreneurship. There is a problem of effectiveness of the supporting organizations? "58% of the ones who never started a business state that it never crossed their minds." There is lack of interest from EU citizens? Or there is lack of communication among them? It is also important to notice that facts confirm the importance of financing conditions and having an appropriate idea as being the most essential factors in the way entrepreneurs successfully implement their new businesses. Important to notice as well is the discrepancy among the EU countries, for some particular factors we can have a difference up to 40 or even 50 points. This illustrates the heterogeneity of European Union and the limitations we may incur if taking this study as an absolute truth for all countries.

2.1. What is Entrepreneurial activity?

Partly due to its popularity as being perceived by the Academia as the engine of development and economic growth (Reynolds et.al 1999), Entrepreneurship concept is being discussed and developed a lot over time by scholars and all different Ecosystem's players. According to (Schoof 2006) despite its normally associated with innovation and risk taking decisions, entrepreneurship its merely the process of opportunities' identification and value-creation through them, either generating a new equity or not. Among these different lines of thoughts and research, (Mc Grath, Mac Millan 2000) established a framework for an entrepreneurial mind-set concept where those with an entrepreneurial mind-set seek passionately for opportunities, always with a disciplined pursuit for the best opportunities. This aspect reveals the importance of integration of strategic

management methods on entrepreneurial activities for the sake of wealth creation. In fact, this is a win-win situation considering that strategic management benefit as well from entrepreneurial thinking (Hamel 2000) by increasing managers' creativity, pioneering and consequently increasing their probability of value-creation strategies. (Hitt, Ireland, Camp, Sexton 2001) Suggests this important conclusion that new ventures and well established firms need to simultaneously be Entrepreneur and Strategic based on 4 main variables: External Networks; Resources and Organizational learning; Innovation; Internationalization. If even the concept can generate such disagreement and discussion, the methods of measurement are not immune to it. Despite the fact some scholars narrow the attention on crude number of generated enterprises in legal terms (Kappler, Amit, Guillén 2010), our concept will stand on the pure value-creation therefore will include both formal and informal entrepreneurial activity given the comprehensive investigation on a range of institutions and individuals this study requires.

2.1.1. Youth type of Entrepreneurs, main challenges and key support activities.

According to a study of International Labour Office, youth are generally three and a half times more likely to be unemployed than adults. There is an identified lack of studies and research on young entrepreneurship as well as a lack of specific measures on youth entrepreneurship's support. (Schoof 2006) Defends that there are needs and particular realities that are not being addressed by policy makers and researchers and even youth's potential and impact on economies' development is being underrated. The data of Global Entrepreneurship Monitor 2013 reveal lower entrepreneur activity (TEA)[16] among youth (18-24) when compared with those of older age (25-34) and (35-44) and it's a global phenomenon that can be observed across different regions of the

[16] Total Early-stage Entrepreneurial Activity rate – Number of Adult population enrolled on Entrepreneurial activity

planet.

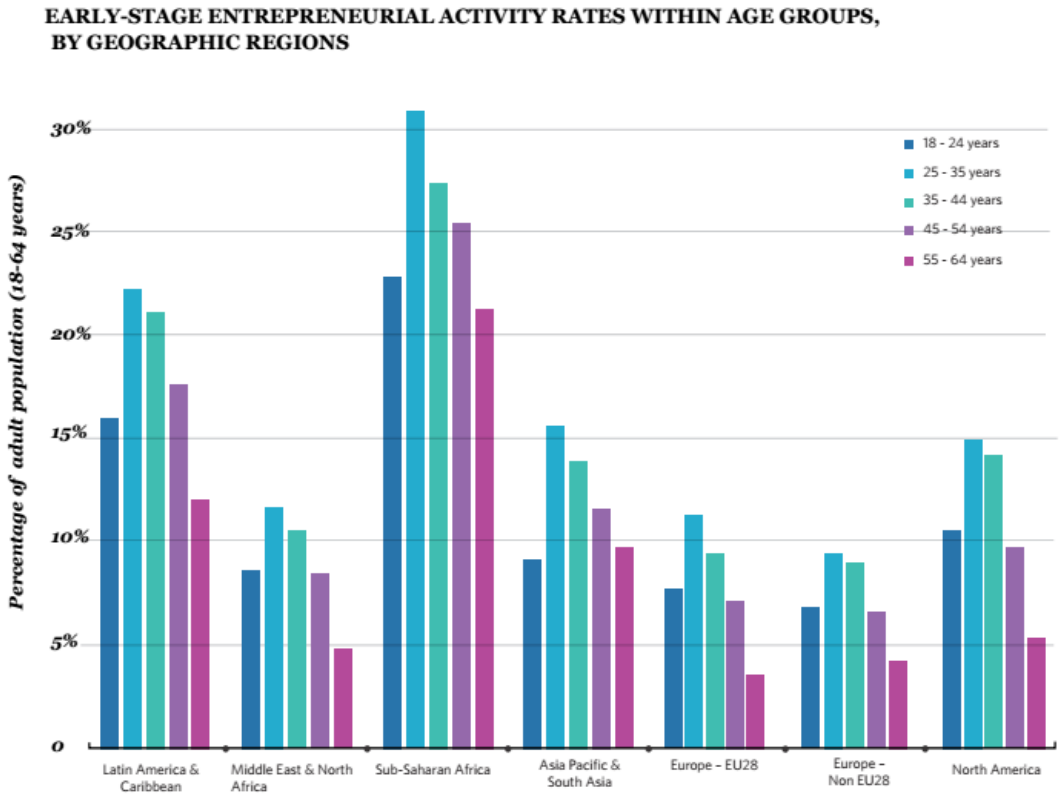

Figure 1 Source: Global Entrepreneurship Monitor 2013

There is still a latent potential among these young population. This research (Schoof 2006) explores a set of constraints and barriers that young people face at an early-stage level based on 5 key factors:

-Social/cultural attitude towards youth entrepreneurship

-Entrepreneurship education

-Access to finance/start-up financing

-Administrative and regulatory framework

-Business assistance and support

Concluding that a tailored policy for youth entrepreneurship should aim at the pre-start-up, start-up and post-startup phases of entrepreneurial process with highlight on education designed to deliver knowledge on motivation and skills development with the main objective of encouraging youth to look at entrepreneurial activity as an opportunity by the change of “job-for-life” mind-set

to “portfolio careers”. And that engagement of all stakeholders of the ecosystem is highly recommended.

According to a Transitional categorization (chigunta 2002) youth entrepreneurs development follow three categories and for each category the researcher gives the different challenges affecting particularly each one and that should be taken into account when implementing a program of entrepreneurial support. It is also important to refer that this levels are generally proven to be true, however that’s not a linear process nor mutually exclusive, consequently, there surely have cases of a different individual development. The three identified categories are (Pre-Entrepreneurs; Budding Entrepreneurs; Emergent Entrepreneurs).

Pre-Entrepreneurs are defined to be the youngest, in a fluctuating phase between studies, work, unemployment or chosen time off for leisure, travel and other activities, therefore they don’t have the skills nor the maturity and financial conditions to be a successful entrepreneur despite they tend to experiment a wider set of experiences that enhances their creativity. Due to the unexperienced kind of entrepreneur the main challenge faced is the access to proper education and the raise of market’s awareness and gain an entrepreneurial mind-set, skills and values. This process depends on each individual’s progress and is meant to be focused on ensuring a higher rate of success on ventures that reach market, thus the strategic skills should aim to enable entrepreneurs to understand the market by developing business plans and industry’s analysis or competitors’ analysis. Regarding this framework the key challenges for youth entrepreneurial institutions identified by author “is to provide practical support services such as targeted businesses development training, advice, role models, and access to finance.”

Budding Entrepreneurs are the ones at a growth and learning stage. In this stage they normally have improved their skills, experience and capital that ensures they are able to run their enterprises. Normally facing three different chapters: 1) Remaining stuck in marginal activities; 2) going out of business; 3) running successful enterprises. Throughout this path they enrich their entrepreneurial skills by collapsing business and learning by their own mistakes. Therefore the key challenges of support should be Growth-oriented strategies in the way of a mentoring or advisory program on more specific to running the business such as improving sales, stock control techniques.

Emergent Entrepreneurs are the ones with the highest level of maturity, had professional experience normally in different areas of knowledge and life. Hence there are more likely to meticulously plan and succeed by running more viable projects. Their biggest challenges are more likely to be related to lack of growing business, hence their support should be focused on new

product strategies development, value addition and the right decision making process of outsourcing services.

2.1.2. Entrepreneurship in different stages of country's development/Different kinds of entrepreneurship?

It is important to understand that across a body of literature one can find some common points that are: the different entrepreneurial behavior on different stages of countries' development, distinction between necessity-driven and opportunity-driven entrepreneurs and that are also some mixed cases with characteristics of both necessity and opportunity. In (Amorós, Bosma 2014) there were made distinctions between different phases of Economies' development: Factor-Driven Economies; Efficiency-Driven Economies; Innovation-Driven Economies. There were proved to have differences as well on the behavior of entrepreneurial activity across these different phases.

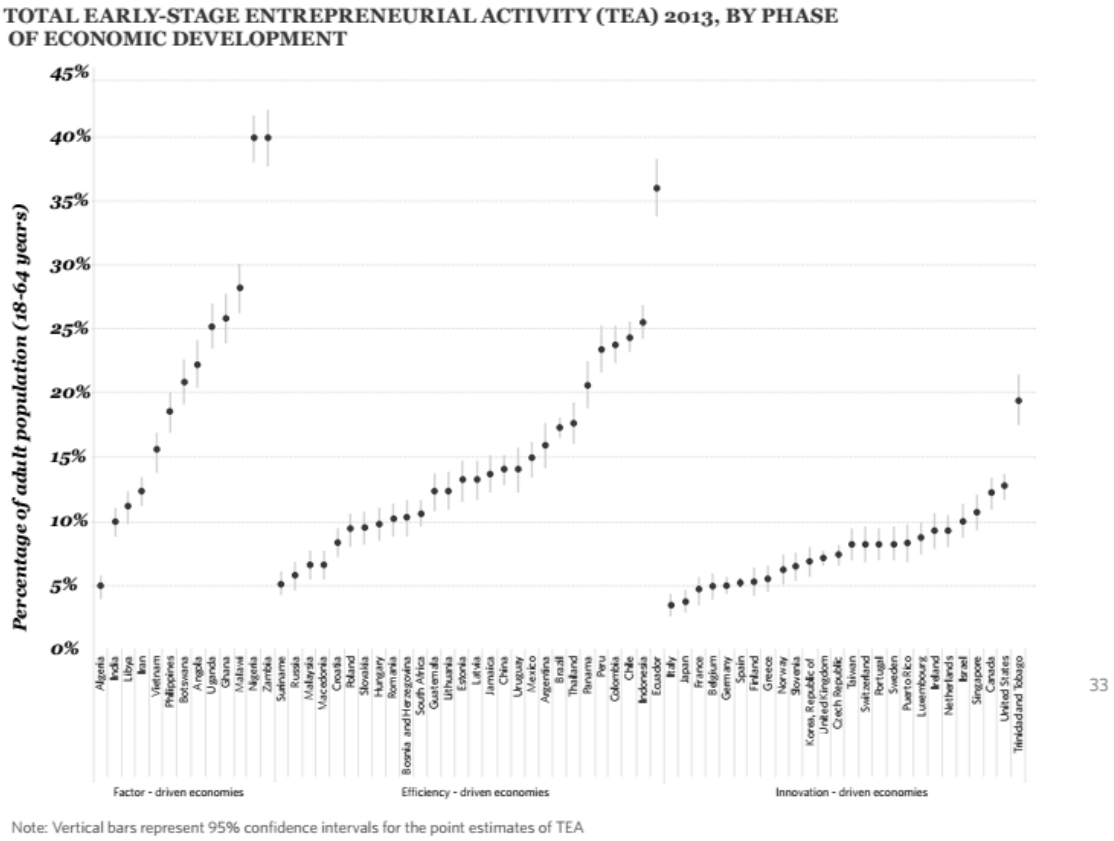

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Figure 2 Source: GEM2013

One can clearly understand the pattern of a decrease of entrepreneurial activity through countries' development. Meaning that on average Innovation-driven economies have a rate of 7 entrepreneurs by 100 adult population and Efficiency-driven economies or Factor-driven economies have progressively more entrepreneurial activity. Generally speaking, this type of measurement relies on the existence of more unexplored opportunities in less developed

countries. "…from an evolutionary economics perspective, new research suggests that disparities in economic growth between advanced and less-developed countries can narrow owing precisely to the growth of entrepreneurial activity" (Galor and Michalopoulos 2006).

Despite this facts the same study let space for a different but complementary perspective that considers every employee's activity inside companies as being progressively higher in innovation-driven economies, meaning that the impact of each employee on a company's value-creation is increasingly higher as countries develop.

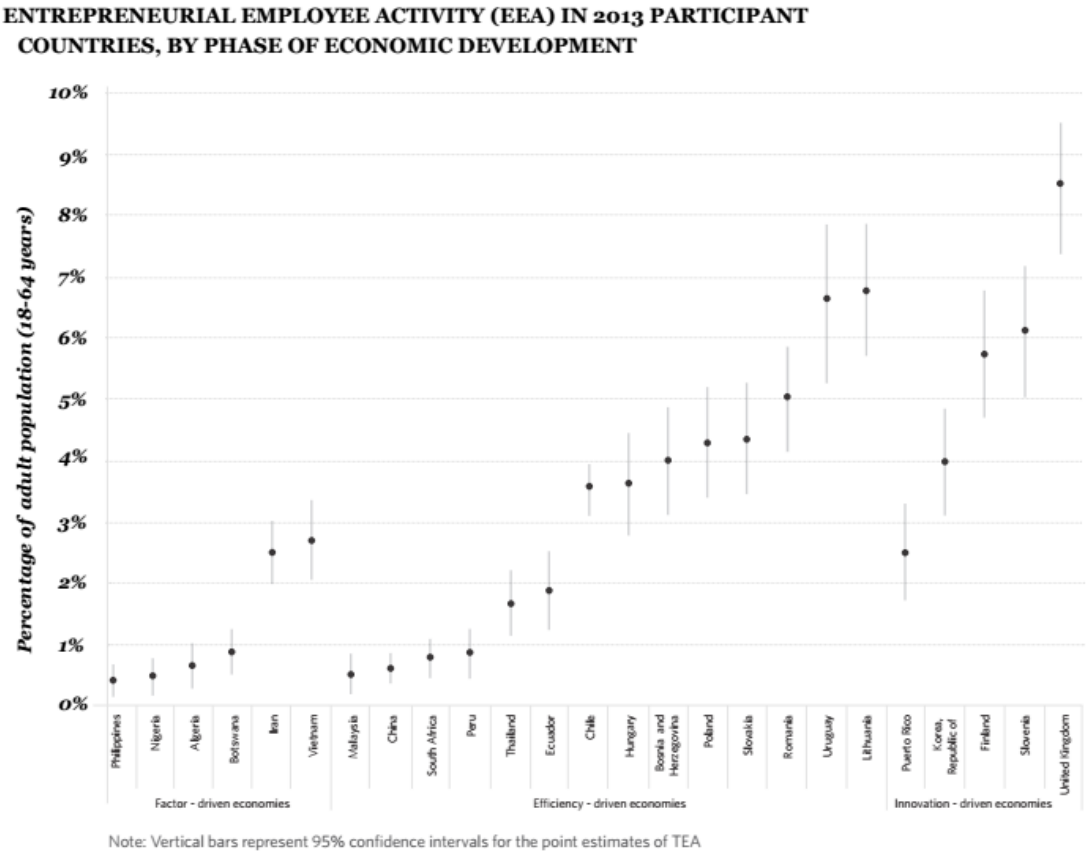
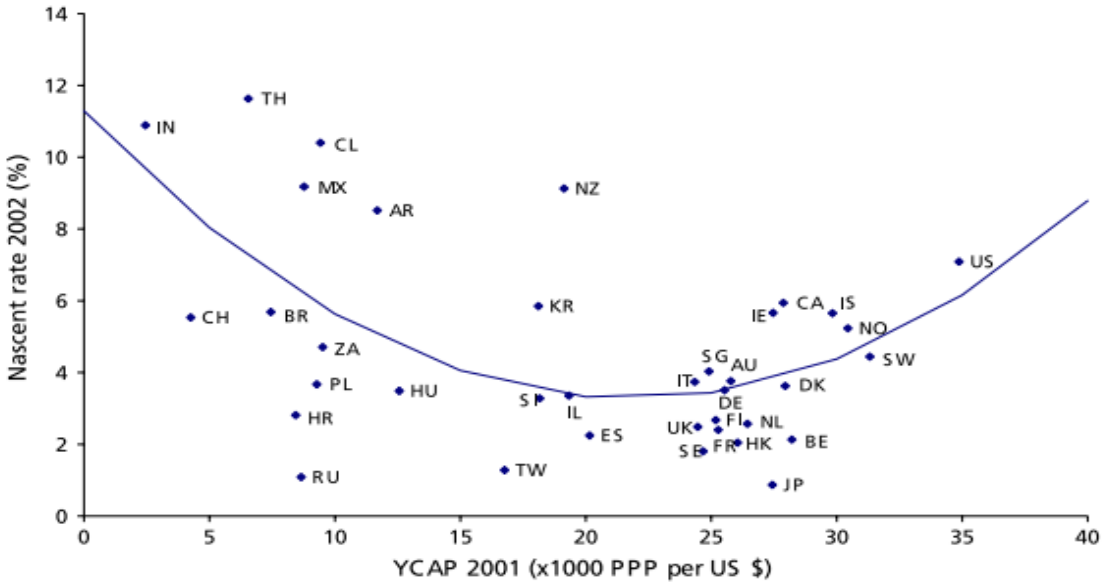


Figure 3 Source: GEM2013

In sum, despite having less entrepreneurial activity per adult population on developed economies, the incremental impact each employee have on its company is, by the contrary, higher. These two side effects makes the global entrepreneurial indicator look like a U-shaped



curve.

Figure 4 Source: Acs, Desai, Hessels 2008

Another well identified pattern is necessity-driven vs opportunity-driven entrepreneurship. (Acs, Desai, Hessels 2008) Opportunity-driven is the voluntary nature of action towards entrepreneurship. Necessity-driven is the individual's perception of the best possible solution of employment, nonetheless not necessarily the preferred solution. Inherently the aspirations for the company's growth may also be influenced by this reasoning, in a sense that opportunity-driven should aspire to grow more when compared to necessity-driven that is expected to quit the business when faced with a new best scenario. One can observe through the next two figures that in fact there is a positive relation between the opportunity-driven entrepreneurship and the Income per capita over the countries and at the same time a negative relation between necessity-driven entrepreneurship since the variable in action is the ratio of both.

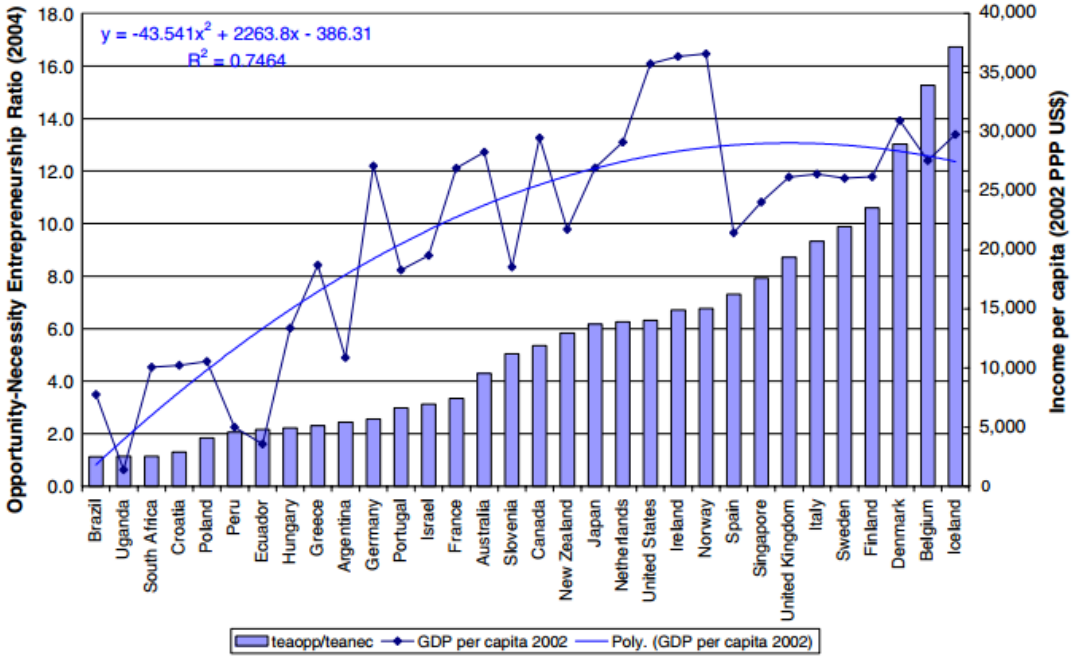


Figure 5 Source: Ascs, Desai, Hessels 2008

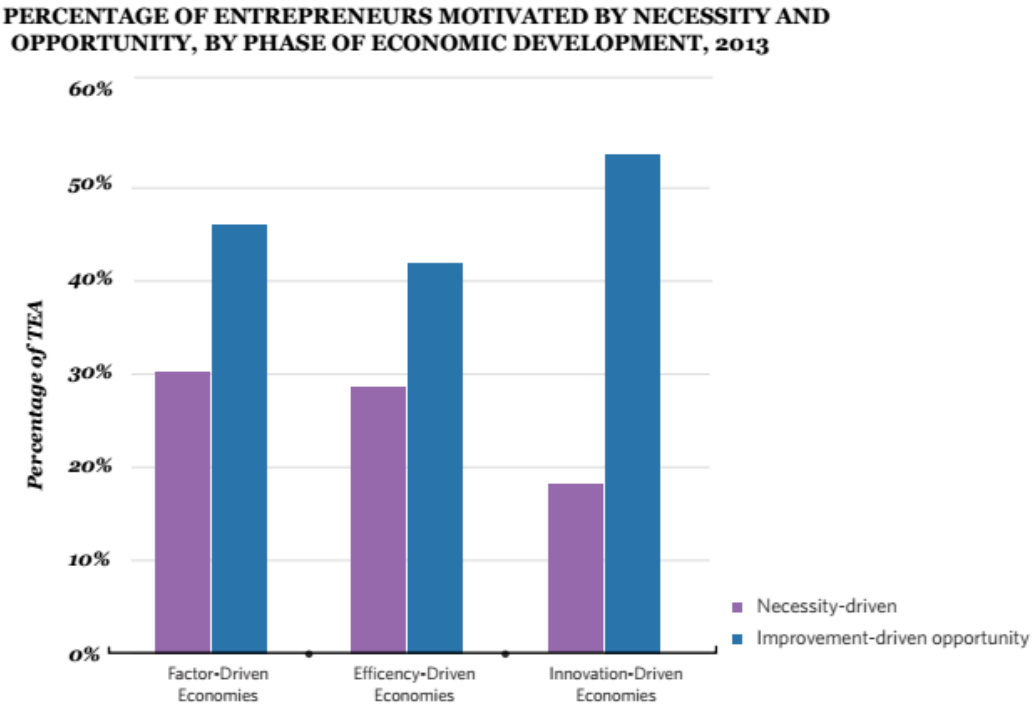


Figure 6 Source: GEM 2013

The fact is, one can also find evidence that in-between this two previous concepts, there are business raised by necessity that turned out to have significant potential of growth and success,

hence having characteristics of both necessity-driven and opportunity driven entrepreneurship (Grimm, Knorringa, Lay 2012).

2.2. Importance of Orientation and Environmental conditions for entrepreneurial activity

Back in (Miller 1983) there were made the foundations for research development regarding the determinants of entrepreneurial activity as being Innovation, risk taking and proactiveness. Variables such as personality factors of the leader and the structure of the organization were also been taken into account and resulted in a model where the nature of the organization made a crude relationship between those factors resulting in a final statement that Simple firms would be determined by the characteristics of the leader; Planning firm would be facilitated by product-market strategy; Organic firms would be a function of environment and structure. In this sense, any activity that would regard the improvement of entrepreneurial activity by orientation would have to rely on this segmentation. Complementing this conceptualization (Covin, Slevin 1989) introduced two other dimensions: hostile and benign environments. Regarding the benign environment its performance was positively correlated with conservative strategic posture, short-term financial orientation, emphasis on product refinement and relying on single costumers. On the opposite side it showed that on hostile environments, performance of small companies was positively related with organic structure, long-term orientation, high-product prices, and concern about predicting industry trend. As (Rauch, Wiklund,Lumpkin,Frese 2009) research suggests, there was plenty of discussion, approaches and ways in which Entrepreneurial Orientation had been analyzed and related to Performance of Firms. Moreover, there was identified an increase of the academic interest in entrepreneurship, namely the relation between EO and performance in a five-fold basis when compared with the previous decade. One of the main issues is the unclear and unsystematic way knowledge has been developed. Based in their examples there were variations of method, scale and dimensions throughout the studies that had been developed in this domain. It became visible that researchers preferred to experiment with adaptations of scale rather than consistently sticking to one particular measurement. In the case of dimensionality, 37 studies viewed EO as unidimensional variable adding all variables in the same scale. Other 14 studies viewed it as a multidimensional, and estimated separate effects on performance for each dimension. In relation to the measurement of performance there was also a bunch of distinctive ways in which researchers developed their analysis. From solely archival financial performance measures, to combined archival and perceived non-financial measures, combined perceived financial and non-financial, or just non-financial measurements. Among these possible scenarios, according to their analysis, self-perceived performance measures dominate EO research. This

research ran a meta-analysis of 53 samples from 51 studies (between 1986 and 2006) with an N of 14,259 companies, the main conclusions where that as long as the strategic activities implied by EO have financial consequences the critical goal of entrepreneurial activity should be focused in financial results. In result EO should enhance strategic thinking and advisory regarding financial outcomes rather than to advance for other goals that organizations and their managers may intend to pursue. This argument will be extremely important to our study, since it centers the attention on the entrepreneurial support organizations in Portugal. Despite the fact that we are in face with an important indicator, due to its statistically significance, the study also suggests that EO-Performance relationship is robust to differences in the measurements of performance. Given the lack of financial information in some countries these were also good news for scholars, because it was proved to still have strong evidence that financially independent analysis produced similar results in what regards EO-performance relationship. This argument will be useful in the terms that it ensures credibility to strategic orientation and evaluation that goes beyond financial measures. It is important to notice that since these studies exclusively take into account the survivor firms, they could be incurring in a biased analysis where they are only accounting for companies that faced high risk and survived. What happened to firms that didn't survived? What is the success rate?

2.3. Impact of governments and environmental conditions on economic activity

Among other players, governments and public institutions can play a crucial role by encouraging or inhibiting economic activity through regulation, taxation, political stability, level of education, employment legislation but also by engaging their economies in global community and moreover the way they are able to attract international entrepreneurship.(Nasra, Dacin 2009) Analyzing United Arab Emirates extreme case where the state was represented by individual actors due to monarchical system, their great latitude in creating change was particularly important in developing the proper framework for the entrepreneurial internationalization, dealing with global and local legitimacy, resource mobilization and exploitation of infrastructure to create and enable entrepreneurship.

In the field of bankruptcy laws (Peng,Yamakawa 2009), governments as formal institutions play a role in reform bankruptcy laws to make them more entrepreneur-friendly. Even though there are plenty of opportunities to explore and good entrepreneurial examples of success, these startups are prominently exposed to high risk of bankruptcy. Since entrepreneurs are inherently risk-taking there is still a probability of some entrepreneurs that want to take that risk, however

certainly an ample set of potentially good projects will stay off the ground if harsh bankruptcy laws continue to be the rule. In fact, risk of bankruptcy and risk of losing their property were the two main reasons in which EU entrepreneurs are more afraid of, (Flash Eurobarometer 2012) at the same time it is socially accepted (80% of EU respondents) that entrepreneurs who have failed once should have at least a second opportunity. The main goal of this study (Peng,Yamakawa 2009) was in summary to advocate more entrepreneur-friendly bankruptcy laws design to make the "pain" less painful for failed entrepreneurs and their firms, and to "gain" from more vibrant entrepreneurship development around the world.

The fact that even the micro environmental factors such as (Chrisman, Chua,Pearson, Barnett 2010) family influence and involvement can proved to have impact at non-economic goals and consequently influence firms behavior also acknowledges the importance of EO and the impact of different environmental factors in the performance of the firms. Even though next two indicators represent two different perspectives, opportunity costs being the next best choice that the entrepreneur gives up, and transaction costs being associated with the economic exchange inherent to the new business, one can find evidence of a negative correlation between these and Entrepreneurial activity (McMullen, Bagby, Palich 2008). Concluding this topic, (Klapper, Amit, Guillén 2010) provided a new set of indicators of a significantly positive relation between higher levels of entrepreneurship and greater economic development, formal sector participation and better governance. Suggesting that countries that have less entry restrictions, less corruptive systems and facilitate entrepreneurship would have proportionated increases in overall economic growth and formal sector expansion. Which was consistent with (Brander et al. 1998) theory of economic growth driven by firm creation rate instead of the existing firms' growth.

2.4. Impact of incubators on Entrepreneurship

Incubators' activities started to be related to reduction of transaction costs of new ventures, by providing several services from flexible rental spaces, shared administrative services and equipment fundamentally acting as a Business center. The Incubators' role have changed and nowadays along with all the referred services they play also the role of training and supporting networking effect given by a relation with business, technical, legal or marketing advisors, investors and inclusively with peers. (Peters, Rice, Sundararajan 2004) In this study, services that revealed a distinguishing factor on performance of incubators were coaching and access to networks. One of the incubators' director stated that "Interactions between the incubator and specialized companies did lead to collective learning". Which reinforces the important role of serving as intermediaries of a cluster of networking connections "In social network term brokers are actors who facilitate links between persons who are directly connected. We propose that incubators can

also be viewed as brokers". There were identified different types of incubators: profit; non-profit; and university-based. An important factor on performance measurement of incubators reveals that selection process is also determinant and the criteria incubators use to pre-select projects have impact on their outcomes. Therefore a simple comparison between types of services provided might not be sufficient to correctly evaluate incubators. Due to their complexity and heterogeneity rough comparisons of different incubators could generate biased conclusions. (Bergek, Norman 2008) Suggested a framework of incubators' evaluation based on three fundamental variables: selection; business support; mediation. (Schwartz, Hornych 2008) Introduced a new line of thought that proves to found certain advantages from sector-specialization of incubators. Instead of being focused on idea or team potential, all incubator's activity should aim to provide all services on a specific sector. The main identified advantages are on facilities' specialization for instance Labs and high-tech equipment; Sector-specific knowledge and know-how enriching training and support services; Higher networking penetration in specific industries; Image impact on the Region by increasing visibility; Despite there are these synergies on this method of incubation some disadvantages may also arise namely on the increase of a sense of competition that could reduce the cross-fertilization among incubated projects; And reduction of heterogeneity effect reducing horizontal networking effect. From the existent literature on incubators one could identify a variety of theories and also some critics: Stephan Bent "the incubator system makes some companies too sheltered, others not sheltered enough".

2.5. Venture Life cycle and its financing needs

According to the framework developed by (Leach and Melicher 2011) successful ventures generally follow a pattern throughout their Life cycle. This Life cycle is composed of various stages:

Development Stage
Startup Stage
Survival Stage
Rapid-Growth Stage
Early-Maturity Stage

The first one, development stage is the development of idea into product and all the brainstorm validation with the inner circles such as family friends and even professors till the prototype creation.

Startup Stage is when first steps of business development is put in practice and initial revenues arise.

Survival stage is where revenues start to grow but still insufficient to pay all expenses. The big challenge is also the way companies compete for market share. Therefore marketing expenses and organizational investments take place in order to equip the venture with the proper strategic tools for a more aggressive commercial behavior.

Rapid-Growth stage is where ventures face a highest growth on revenues that is higher than expenses being normally supported of economies of scale on production and distribution. This stage is critical, since if a venture can surpass survival stage it could mean of a market share gain from firms that are still on survival stage. But most important than all, this is the stage of highest value creation for the venture.

Early-Maturity Stage despite increasing revenues and cash-flows, ventures face slower growth rates. This stage is also associated with financial decisions of either exit or remain as shareholders.

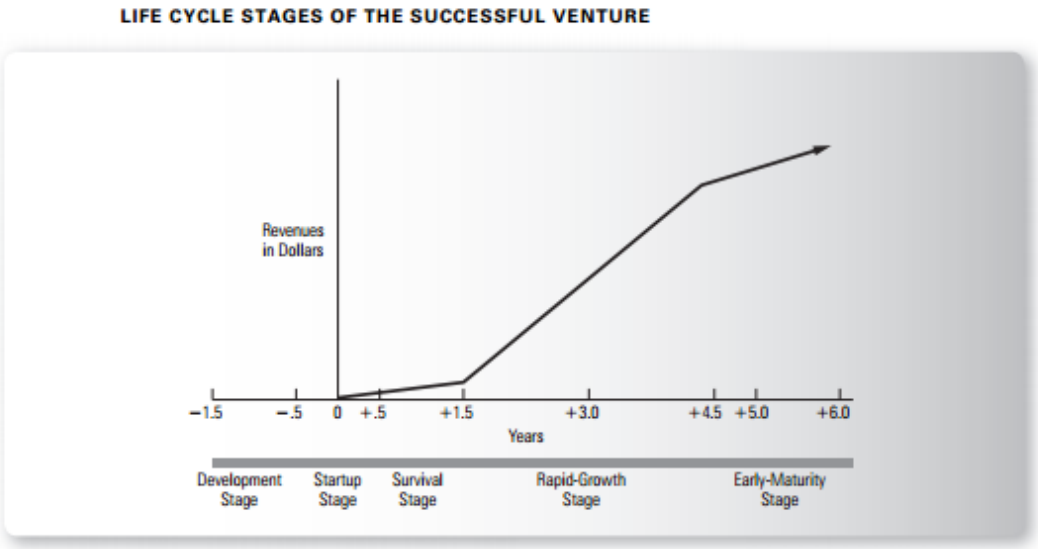


Figure 7 Source: Leach, Melicher 2012

Early-stage ventures are in their development, startup or survival stage and their development can normally be graphically expressed in terms of revenues (see Figure 7). The period range between one and half years before startup stage and up to six years after. This period can vary from venture to venture according to their type of product or service being sold. Some products may take less or more time to develop than others. Generally, a typical successful venture has this type of behavior with operating losses on startup and survival stage. Free cash flows, in its turn, tend to lag operating profits according to the initial investment in assets during these prior stages and therefore occurring typically at late Rapid-Growth and Early-Maturity stages.

Due to its nature the authors define early-stage ventures as undercapitalized since their beginning. This reality highlights the importance of the existent several forms of financing. This external need of financing is inherent to some problems of information asymmetries and moral hazard problems (Nofsinger, Wang 2011). Associated with the different lifecycle stages were in general defined (Leach Melicher 2011) the venture's financing needs and its corresponding major sources of financing.

TYPES AND SOURCES OF FINANCING BY LIFE CYCLE STAGE

1. VENTURE FINANCING

LIFE CYCLE STAGE	TYPES OF FINANCING	MAJOR SOURCES/PLAYERS
Development stage	Seed financing	Entrepreneur's assets Family and friends
Startup stage	Startup financing	Entrepreneur's assets Family and friends Business angels Venture capitalists
Survival stage	First-round financing	Business operations Venture capitalists Suppliers and customers Government assistance programs Commercial banks
Rapid-growth stage	Second-round financing Mezzanine financing Liquidity-stage financing	Business operations Suppliers and customers Commercial banks Investment bankers

2. SEASONED FINANCING

LIFE CYCLE STAGE	TYPES OF FINANCING	MAJOR SOURCES/PLAYERS
Early-maturity stage	Obtaining bank loans Issuing bonds Issuing stock	Business operations Commercial banks Investment bankers

Figure 8 Source: Leach, Melicher 2012

Seed financing was defined as the first source of financing on a venture's life cycle. This primary source was generated among entrepreneurs' inner circle and composed of Entrepreneurs' Assets as the main source being complemented with family and friends support. This represents an informal and inexpensive way of financing the first stage of venture – Development stage - which normally face absence of sales.

Startup financing, otherwise are the funds that make sure new ventures overcome development stage of business opportunity improvement to the phase of production, and sales. Though inner circle could still play a primary role on this startup stage financing, the need of a broader and formal way of financing normally arise. This need is normally ensured by an outer

circle of investors. Business Angels and Venture Capitalists assume a huge role on bringing the necessary funds to this new stage where revenues begin to appear but not in the same rhythm of venture's needs of capital.

First-Round Financing is clearly related to Survival Stage of a venture. In this stage, certain capital needs derive from the strategic decisions and investments of ventures. This new strategies and investments are implemented with the goal of increase the standard of revenues on a short future, hence their market share. In order to face investors' expectations, financial statements start to have more importance in terms of information disclosure, since this new way of financing is assembled through an expanded circle of investors. This expanded circle comprises government programs and suppliers along with venture capitalists and business angels.

Second-Round financing, Mezzanine and Liquidity-stage are considered as other rounds of financing that ensures liquidity for companies on rapid-growth stage that is normally raised in order to solve inventory problems, to back working capital expansion or to ensure liquidity to the existing shareholders.

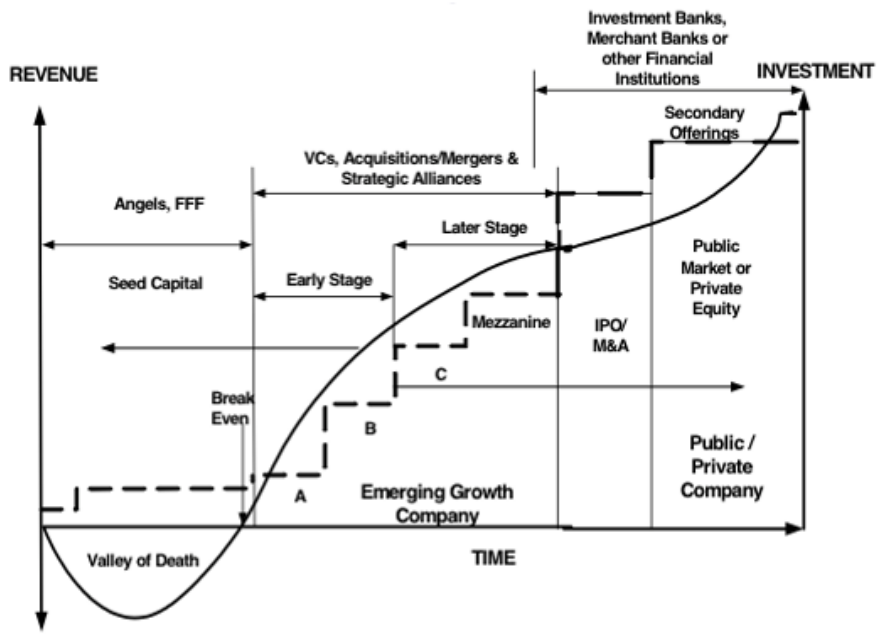


Figure 9 – Venture lifecycle financing Source: EBAN toolkit 2009

Institutional investors normally rely on the experience of entrepreneurs in managing start-ups and the quality of investor protection to decrease moral hazard problem. In the case of informal investors, since they tend to have a social relationship with entrepreneur, the information about the skills and character of the entrepreneur are already part of investor's understanding (Nofsinger, Wang 2011).

Regarding our thesis these are the most important ways of raising external equity at new venture reality. Therefore although there are other ways of financing available on the market as one could see on the Figure 9 there was not a need for a further deepness on those sources of financing.

2.6. Financial players' evidence

2.6.1. Business Angels

Angel investment were estimated to be more than 5 Billion euros in 2012 (EBAN2013)[28] the impact they have had on start-up ventures is incomparable with venture capital funds. In this terms historically business angels have contributed for entrepreneurial activity and have financed more than ten times the number of firms than venture capital did (Baty, Sommer 2002). In their definition, Business Angels are not rational, since most of their investment are related with non-economic reasons, this suggests that tax incentives and government giveaway programs could have little impact on promoting this activity. Due to these reasons, they are hard to study and categorise nonetheless are the principal source of seed and start-up capital. A good example of this difference, the authors suggest, is the high number of VC's on Germany and Japan but due to a lack of BAs, a small number of deals associated to the potential.

[28] Activity Report 2013- EBAN

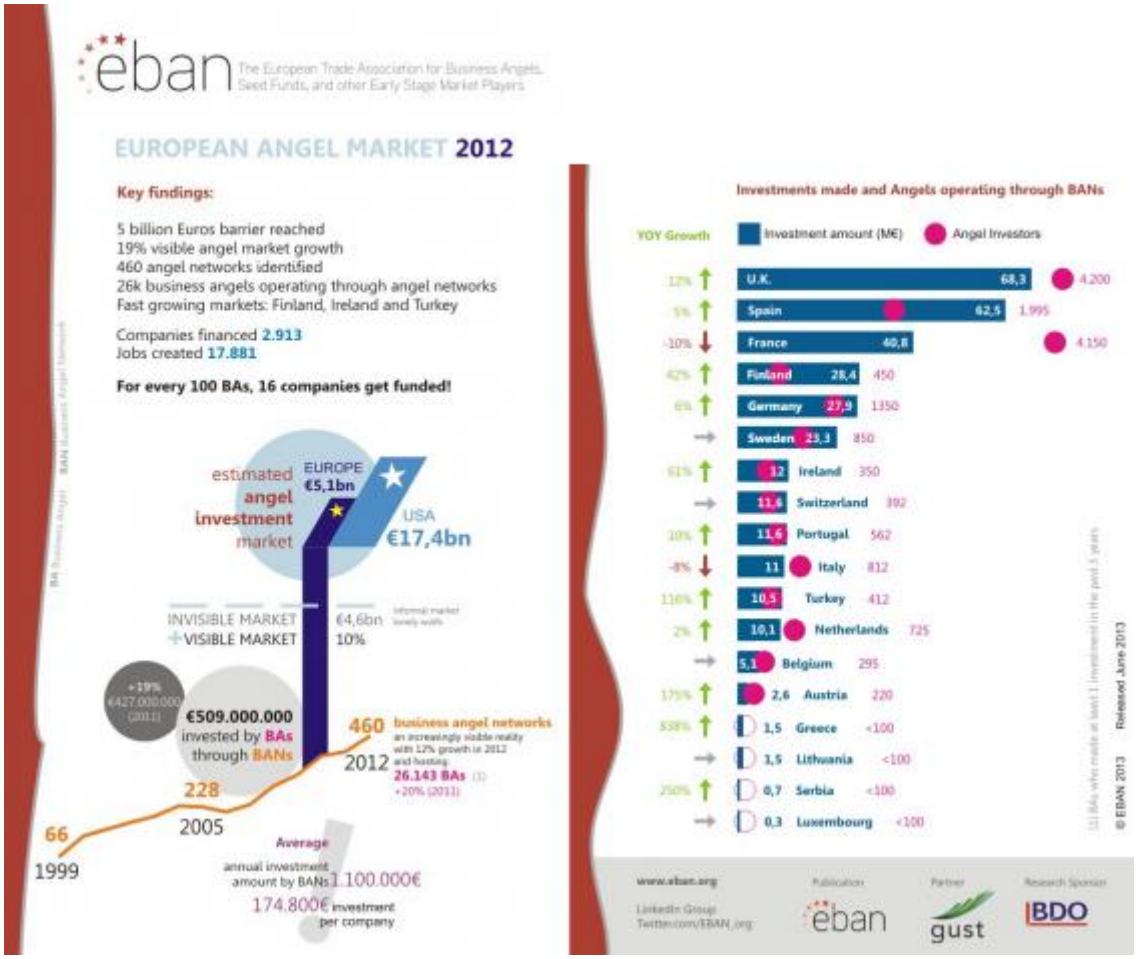


Figure 10 Source: EBAN 2013

From (HBAN 2013)[29] a typical angel investment was defined to have 8 stages:

Deal Sourcing; Deal Screening; Initial feedback/coaching; Company presentations; Due diligence; Investment terms and negotiations; Investment; Post-Investment support

These stages follow a structured criteria that represents the principles for the investment decision. Top three investment criteria:

Management team; Exit opportunity; Revenue Potential

(Certo, Covin, Daily, Dalton 2001) (Certo 2003) had a special attention on examination of wealth creation process and retention in IPOs through the practice of underpricing. They found evidence that entrepreneurs would tend to include smaller investment banks or other players at an earlier stage as board members reducing posterior underpricing effect when going public reducing the problems of moral hazard and information asymmetries lately described by (Nosfinger, Wang

[29] HBAN 2013 – Raising Business Angel Investment - European Booklet for Entrepreneurs

2011). Which emphasizes the role of this players at an early stage but also the positive effect it has on a later stage of a venture's life cycle.

2.6.2. Venture Capital

One can see on the following figure that Venture capital activity although representing 9,4% of total investment in Europe in 2013, this type of early-stage investment reached more than 58% of number of companies invested in which 99% represented Small and Medium Entreprises.

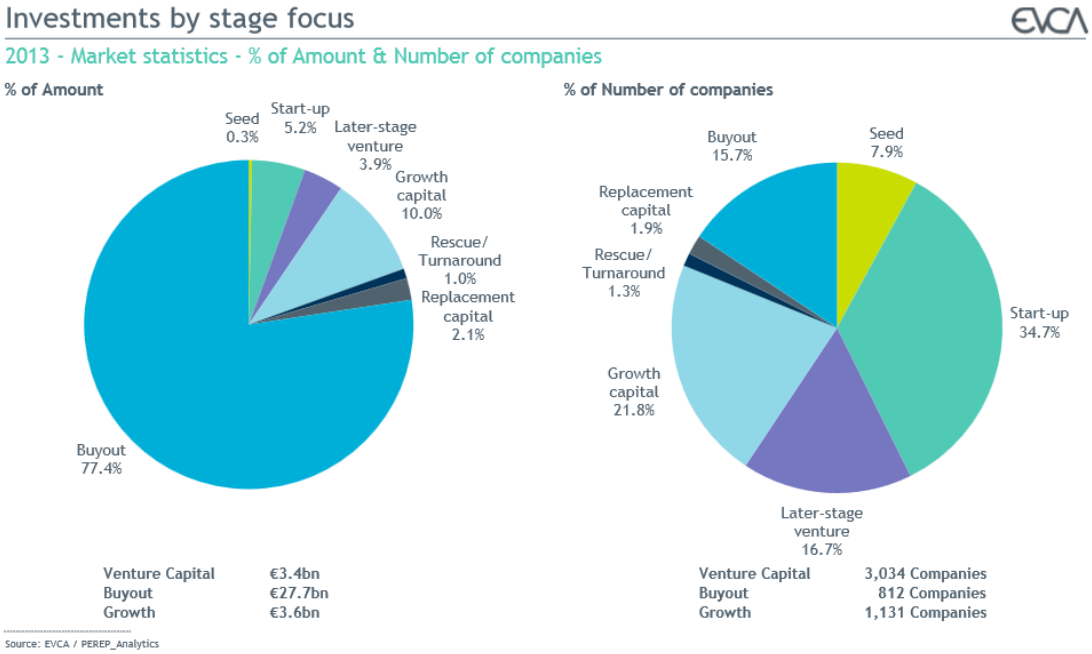


Figure 11 Source: EVCA 2013

Portugal was 13th on VC investment in GDP% and fit below the European average of investment. This situation contrasts with BA investment which figured on top 3 of European countries in GDP%.

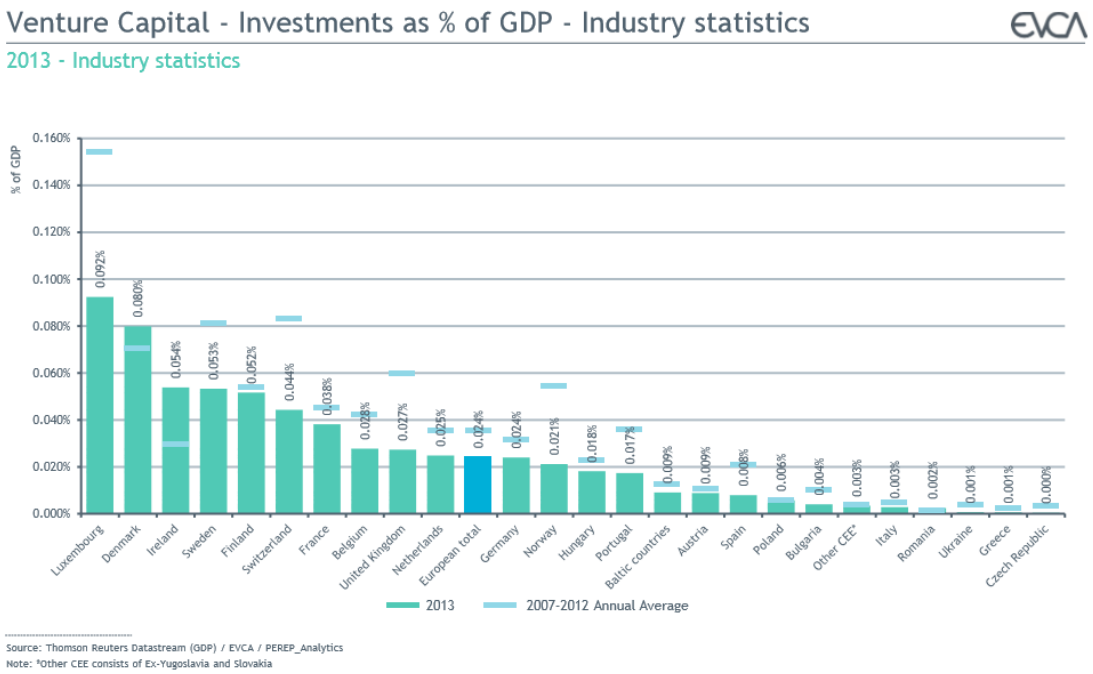


Figure 12 Source: EVCA 2013

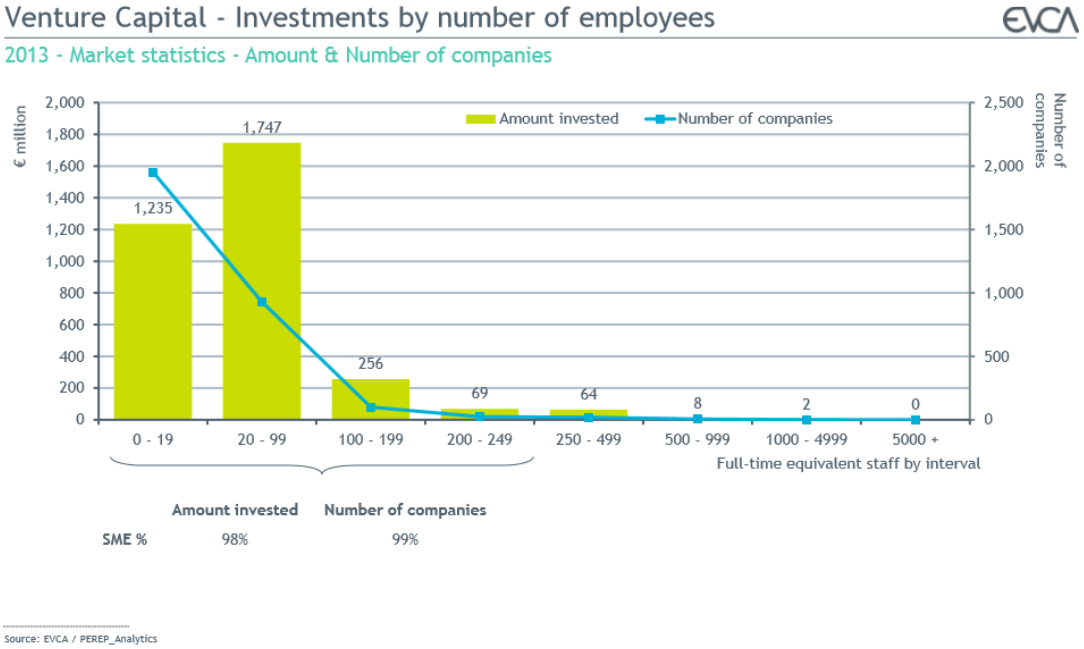


Figure 13 Source: EVCA 2013

Keuschnigg and Nielsen (2006) drew conclusions based on a more successful oriented VCs than a volume oriented policy. Also notice that most of existent programs are not based on success-related incentives but cost-reduction. By reducing the quality of entrepreneurship this type of VC activity should be discouraged. Fiscal reduction should be implemented as a measure of self-financing mechanism instead of a subsidy oriented. They also report that while accounting for a small part of total investment, VC capital tends to be concentrated in the most innovative sectors

of the economy. And (Kortum Lerner 2000) reported that 1 dolar invested by VC worth 3 times more in patents stimulation than traditional corporate R&D investment on US.

3. Methodology

The research design and interview guidelines for this thesis were provided by Professor Andrei Villarroel and the field work was conducted as a collaborative effort within the context of the Dissertation Seminar taught by Professor Villarroel February through June 2014. The aspect that this thesis refers to within that research design aims at understanding the role of Entrepreneurship Support Organizations (ESO) with respect to the Financial dimension. A baseline set of 20 ESOs contacted for this research were organizations who had signed a Letter of Intent to contribute to doing research with Professor Villarroel. We also identified and enrolled 7 additional ESOs to have a richer sample, representative of the Portuguese ecosystem.

A total of 21 interviews and 6 surveys were conducted as a collaborative effort with other Dissertation Seminar participants who addressed different dimensions. We collected primary information on 27 of the major ESOs and covered all types of Organization. From co-workspaces, incubators, to accelerators, networking, educational supporters, and Investors. Our full list of Interviewees can be accessed on Appendix 2. After interviewing the first set of 21 ESOs and by the knowledge we had gathered at the time we were able to develop a framework of main support factors of each Organization. By identifying the main support activities ESOs offered to the ecosystem we were able to tag the differences among each other, some patterns in the way they behave and also some measurements of the services' quality.

3.1. Interview design

Our interview guidelines (see Appendix 1) were divided in 4 main categories: Demographics, Services provided before and after funding; Impact on Employability; Motivation. These 4 categories intent to frame all ESOs' activities of support, their specific support on marketing, strategic and financing areas along with main partners, specialization and their particular view of the ecosystem. Detailed version of Interview's Guidelines can be found on appendices.

3.2. Survey design Error! Bookmark not defined.

Our study would rely on type of services ESOs provided to Entrepreneurs. In this regard, no more than a survey would be necessary to gather the information needed at that stage of development for the remaining 6 ESOs (see appendix 3). The binary survey was composed of 20 (yes or no) questions that are also available on appendix 5. The main aspects of survey were essentially focused on Educational; Infrastructure; Network; Impact and Partnership reach of Organizations.

3.3. Data treatment

Regarding the information one could gather on a first stage analysis, one could start developing the model of analysis and organise the collected information on an excel file. Deriving from this excel file and new structure of analysis one considered that available information would not be sufficient to have a well-defined quantitative analysis with employability outcomes. Despite using a qualitative framework to analyse the financing impact of ESO on entrepreneurs previous studies reveal this non-financial measures are still significant (Rauch, Wilklund, Lumpkin, Frese 2009). After all information gathered one were able to make some calculations, graphs and analysis that result on the following model of 4 core types of Organisations and 4 Levels of impact on financing issues of entrepreneurs.

3.3.1. Organisations' type

There was established a model for classifying the different types of Organisations through the identified patterns among Educational, Infrastructure, Network and Financial frame. This model of classification was based on the services each Organization provided to entrepreneurs.

Table 1 - Measurement and Organisation types' classification.

<table>
<tr><th rowspan="2">Reach</th><th colspan="4">Organisation types</th><th rowspan="2">Focus</th></tr>
<tr><th>Education</th><th>Infrastructure</th><th>Financial</th><th>Network</th></tr>
<tr><td rowspan="2">Out Reach</td><td rowspan="2">Mind-set ignition
Pre-University school Education
University Education
General Education
Professors' Education</td><td rowspan="3">Administrative or physical Infrastructures</td><td rowspan="3">Provide Investment</td><td>Networks to cross areas of kowledge
Network events as final Purpose
Improve Business Networks
Legal support</td><td>Projects development</td></tr>
<tr><td>Networking Partners of other ESOs
Work in partnership with other ESOs
Network events as final Purpose</td><td>ESOs development</td></tr>
<tr><td>In Reach</td><td>Mentoring
Coaching
Trainning
Workshops</td><td>Match with investors
Partners with investors</td><td>Deal</td></tr>
</table>

According to this measurement there were identified for each ESO the services provided and afterwards the selection process determined their final classification by considering the coverage of possible services in each type. Education in this study refers to the Entrepreneurial Education also referred as Entrepreneurial Orientation by other authors, and it is composed by two areas the In-Reach and Out-Reach services. The main difference between these two areas are the target of the provided services. In the case of In-Reach services the ESOs' target is entrepreneurs that are already inside their boundaries such as incubated projects or acceleration programs. In the case of Out-reach services the target is normally people identified as potential entrepreneurs that need to have some mind-set ignition in order to take advantage of their natural existing qualities. The measurement was considered as the level of coverage of possible services and for instance, it was

classified as an Education Organisation if it had more than half of the possible services in Education. Regarding Network classification the 3 different areas of analysis were the project development, more focused on projects that were inside boundaries of ESO; the own network development of ESO regarding the same players in the ecosystem and also the networks with investors that would facilitate the deal between investors and entrepreneurs. Regarding financial and infrastructure types it was basically classified according to the existence of one service, the investment on financial and physical support for infrastructure. This identification of provided services in all types was done by our understanding of Interviews and previous research work on ESOs. On Appendix 4 one can find more information about the requirements of each classification and service.

3.3.2. Levels of impact on Financing

Among these different types of Organisations there was still a need to split their activity in particular Levels in order to better integrate the Impact of ESOs on financing issues of Entrepreneurs. The measurement was based on the number of services provided by each ESO among the possible services in each Level.

0. Nothing
1. Improvement (Idea, Business, Team development)
2. Specialization and Globalized
3. Relationship with Investors and Government
4. Investing Money

Why these levels?

First of all, we have chosen this framework of evaluation in order to better understand in which level is the Portuguese ecosystem, namely if in surplus or deficit of support on particular levels. Another reasoning is to understand among the analysed sample if there is a leader or a group of leaders that other ESOs could look at as an example and afterwards follow their successful path. According to (Rauch et.al 2009) ESO should focus attention on financial results of Entrepreneurs rather than other type of goals Entrepreneurs may intent to pursue. Last but not least, because there are different ways of impact on entrepreneurs financing and it is important to have a clear differentiation.

Regarding ESO's impact on financing of new projects one excluded the Out-Reach Educational services of Level 1 - Improvement, since In-reach methods are more focused on improvement of existing projects rather than simple mind-set ignition oriented activities. Along with In-reach

methods it were included all the services that directly improved the quality of business and team. The Second Level was defined as Specialization and Globalized since one of the main goals of Investors is to have high quality projects associated with ESO's level of specialization that enlarged the level of expertise on support (Schwartz, Hornych 2008) as well as internationally exposed projects that enlarge scalability (source: anonymous interviewee). Level 3 - Relationship with investors, the way they work in partnership with investors reducing the gap between their expectations and entrepreneurs (HBAN 2013), (Nosfinger, Wang 2011) along with the support of Government (Nasra, Dacin 2010) were considered as crucial factors to successfully generate entrepreneurial activity and raise investments on projects supported. Finally, the last level was the act of providing real money to new ventures as investment. This excludes prize money offered on competitions by being in some cases insignificant amount of money and because it does not represent a change in venture's shareholder structure.

Important to notice that this study represents a qualitative and not quantitative measurement since it is based on our understanding of interviews and survey. One tried to gather quantifiable data throughout the interviews but due to the lack of this information in the big majority of ESOs, it was not possible to develop a comparable quantitative framework.

4. Analysis

4.1. Organisations' types

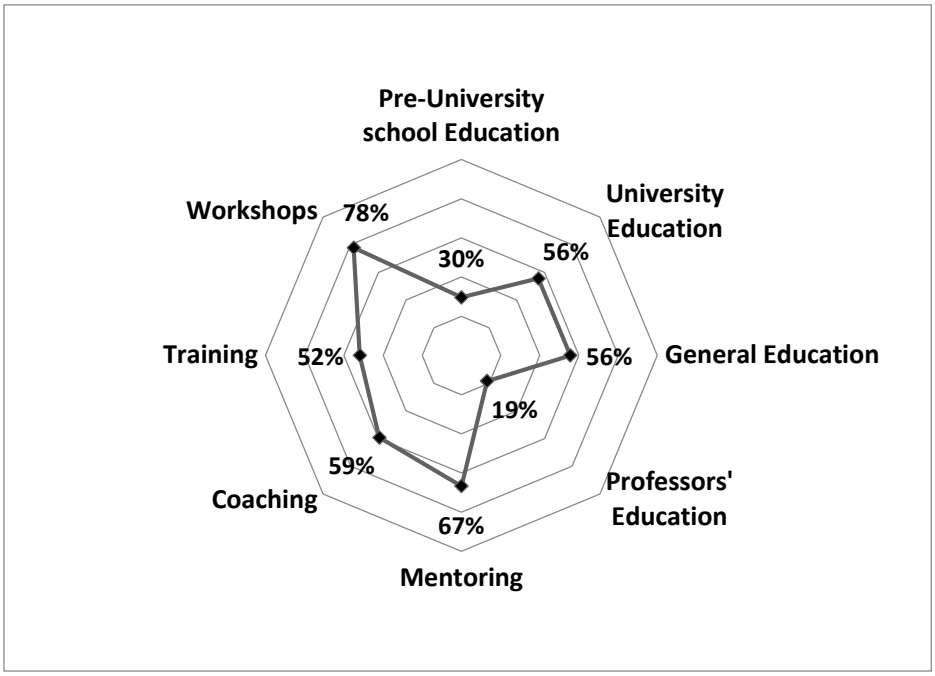
This structure of classification enabled us to divide the different Organisations by type regarding their main services provided to the entrepreneurs. There are, as previous stated, 4 main categories being Education; Infrastructure; Network and Financial. It is important to notice that the big majority of our sample were cases of hybrid organizations, meaning that had more than one type on core activity.

4.1.1. Education

In this category are included Organisations that have their core activity divided in two areas the In-Reach and Out-reach as presented previously. The In-reach activities are more popular among the analysed sample as one can observe on Figure 14, Pre-University and Professors' Education are the less frequent service. This may suggest some lack of mind-set activities among young population and reflecting our cultural lack of appetence on being self-employed as suggested by Flash Barometer of European Comission. There are some interviewees that consider Entrepreneurship as a natural factor that cannot be taught. Others believe that among Portuguese culture there is a covered entrepreneurial spirit that just needs to be ignited, thus attributes a huge role to mind-set ignition activities in the amount of entrepreneurial activity that is being generated in the country. Facts reveal that youth that is exposed to entrepreneurial education have 4 to 5 times more chance on being self-employed (Francisco Banha video 2012)[42]. In this sense, as sooner it came to the day-to-day reality in a person's life as bigger the changes of self-employment and entrepreneurial activity. Other point of view is that opportunity entrepreneurship normally came from older people (Reynolds et al. 1999) that have more life-experience and maturity, also probably have professional experience and some knowledge on a particular industry, these combined factors will help generate an opportunity identification and consequently a more valuable idea. Therefore the main role of ESOs should be focused on improvement of team skills that will lead this promising idea to the next level, even though if the next level is to quit (source: anonymous interviewee). In this regard, workshops and training would play their major role.

[42] http://www.youtube.com/watch?v=hfx7AgtXNV8 "Ecosistema enpreendedor Português"

Figure 14 – ESOs' Entrepreneurial Education Services



The Learn by doing method is somewhere in the middle of these two points of view in the sense that it complements the mind-set ignition approach with a skills' improvement model that is aimed to potentiate the probabilities of having more projects on the market emerging from universities (source: anonymous interviewee). This learn by doing method consists of a mind-set ignition methodology that is applied mainly on university students and have as a crucial factor the culture of failure. By cultivating this failure driven program the objective is to make sure entrepreneurs have this same experience on running a business and going through the small mistakes and challenges often real companies face. By this mechanism entrepreneurs enrich their experience and knowledge by at least knowing what they cannot do again. In this particular situation, mentoring services are crucial in order to have a faster process of knowledge transfer. Typically mentors are more experienced people that could have been successful entrepreneurs and are already aware of more common mistakes entrepreneurs will face. Note that sometimes five minutes brainstorming with mentors could be the same of two months of internal project development for a startup (source: anonymous interviewee).

4.1.2. Infrastructure

This type of organizations have the key role of reducing fixed costs that new ventures face because normally provide a package of services like physical, co-work or virtual spaces, software, meeting rooms, administrative services like printing machines, post office, conference rooms and also fiscal headquarters. This reduction on fixed costs for new ventures turns to be crucial because they normally face high uncertain pattern of cash flows due to their initial stage development (Leach

Melicher 2011). It can have a positive impact on entrepreneurial activity since it reduces the transaction and opportunity costs (Mc Mullen , Bagby, Palich 2008). This simple agglomeration can produce reductions of costs that could determine short-term financial viability of projects. In our sample we have 48% infrastructure organisations that are spread all over the country from Lisbon to North and inclusively in Madeira Island. The big majority are incubators and technological centres with a small representation of co-work spaces. Precisely influenced by this spectrum of facts the big majority of infrastructure organisations is supported by Government or Public institutions such as Universities and city councils.

4.1.3. Financial

In order to have a complete picture of the ecosystem we opted for having on our sample the most relevant players on financing sector with a share of around 7%. The main contribution of these players to our study was to provide important insights on ecosystem's stage as long as an external perspective on ESOs performance and impact on financing conditions of entrepreneurs that was also relevant and meaningful. Hence this contribution was essential to breed a solid qualitative analyse.

4.1.4. Network

This type of organizations have three identified focus areas in our framework: Project Development, ESO development and Deal.

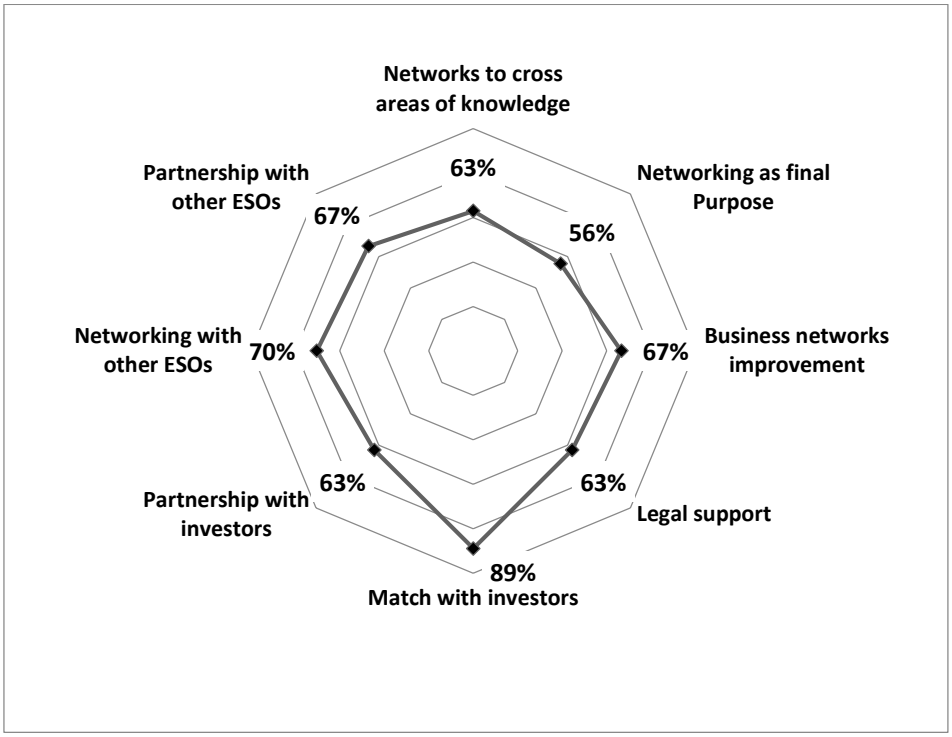
Project Development

In terms of Project development, one of the most important aspects of a good project relies on entrepreneur's experience, team, namely diversity of capabilities (HBAN 2013) (Nosfinger, Wang 2011). In this particular issue Portuguese projects have struggled to find the perfect environment due to their structured education system. On universities there is not a big sharing culture or programs to cross areas of knowledge, normally universities have little if none interactions with each other (source: anonymous interviewee) . It turns out that at the end of the university life-cycle, last year students tend to lack of a broad and consistent network outside their area of knowledge. In this regard 61% of our sample have specific Networks to cross the area of knowledge such as platforms, events or school programs in partnership with other universities. This issue has been identified by major players on the ecosystem and are emerging the first strategies to solve it. Despite the aim of these strategies is to stimulate the increase of projects enhancing co-funding opportunities is still difficult, in my point of view, to have a significant flow of co-founded projects raising from these platforms. The handicap is the capacity of generation of commitment and empathy among possible co-founders through these artificial channels. This being said, there is still

a significant path till reaching natural environments of cross-knowledge creation as the USA so called “campus effect” or the atmosphere created in Israel with the mandatory military service on youth (source: anonymous interviewee) which naturally foments entrepreneurial business creation.

Improvement of Business Networks such as finding more efficient distribution channels, the right suppliers, or testing the market along with legal advisory are services that also enables new ventures to develop their projects by expanding the network and our results show that ventures who already are inside the ecosystem have enough amount of support on this strategic business development tool, or at least there are adequate amount of ESOs that provide this type of service throughout the country. The main issue is to enlarge the number of venture creation. At this respect there is missing a good plan of information in order to make potential entrepreneurs know that are an ample set of support available on this respect. Which relates with the pre-identified lack of out-reach oriented activities on Education type of ESOs.

Figure 15 – ESOs’ Network Services



ESO Development and Deal[43]

Nowadays the network effect have a massive impact on a new venture’s visibility and probability of having success. Thus the network each ESO is able to generate will enlarge by the same reasoning

[43] Deal will be better explained at Level 3 of ESOs impact on entrepreneurs’ financing

the probability of each new venture to succeed. If we take a brief look on Silicon Valley's (Martin Kenney 2000) history that has more than 50 years of development, it had a strong component on networking, sharing culture and open source methods, particularly on transistors' industry. On Portuguese ecosystem, despite the identification of a quite impressive quality on ESO's services if compared with international peers, it is important to notice that this holds for individual classifications. There is still a lack of a more cooperative approach among Portuguese ESOs. Looking at our data, the most common form of interactions is merely regarding networking or communication partnerships or a match with investors. This match with investors represents basically investors on a panel of judges in competitions or a brief pitch from entrepreneurs in other context. And in terms of ESOs relationship it mostly represents leveraging tools of communication of each ones' event. In the table below one can show that the big majority of ESOs relate with less than 4 other ESOs. And that just two have a close relationship with more than 13. Note that two ESOs have more than 13 connections being essentially Portugal Ventures the venture capital fund of government and Beta-I the first mover on this ecosystem.

Table 2 – Links between ESOs

Number of links with other ESOs	Number of ESOs
0-2	13
3-4	7
5-6	4
7-8	2
9-10	0
11-12	0
13+	2

This being said, the ecosystem still needs a deeper set of partnerships which would intent to effectively work and produce a set of programs that lack a macro structured view, both for the strategic issues of ESOs and in line with investors' expectations, promoting a sharing of knowledge culture that would benefit the ecosystem as a whole instead of single ESO visibility.

4.2. Hybrid Organizations

The big majority of our sample as well as ESOs of the ecosystem in general are not of a pure type of organisation. As stated previously by (Peters, Rice, Sundararajan 2004) generally Infrastructure services are associated with Network and Education due to their centralized incubation systems. It

enlarges the possibility of having a network environment among incubated ventures that facilitates the improvement of business networks and a sharing culture of knowledge. This kind of physical centralization helps to leverage networking and educational events like conferences or workshops with specific goals and addressing particular needs of their incubated ventures. This educational events are normally meant to address incubated companies' needs and are essentially in-reach dedicated. Even though there are reported out-reach activities the power of attracting outsiders to this type of environment, in my opinion, is still irrelevant to be considered as a mind-set changing mechanism at a general level.

Network and Education are also close related in terms of its basis and in terms of ESOs' behaviour. Among hybrid ESOs one can also identify a pattern between these two core support types. Actually, throughout the data one can find evidence that 78% of ESOs that had Network or Education as their core activity had the other as well. This essentially reinforces this close relation and identify a particular set of ESOs that are Network and Education core providers without infrastructure support. This appears to be the case for accelerators and university born organizations that fundamentally aim to increase awareness and mind-set of entrepreneurship among university culture. It is quite a good signal regarding the practical impact on ecosystems since this behaviour shows that ESOs are not only focused on show-off events or fashionable ways to treat the theme as a social trend. Instead, with this behaviour, ESOs are complementing mind-set ignition activities with proper tools on business plan development, cost design and market testing. This behaviour truly enables new ventures' creation by accelerating their development with special regard on business development.

4.3. Levels of Impact on Financing

In order to proceed with the analysis of ESO's role in the ecosystem it was necessary to have a broader examination of the environment so as to identify the main levels of activity. Due to complexity and heterogeneity of ESO's programs (Valerio, Parton, Robb 2014) simple service distinction (Peters, Rice Sundararajan 2004) might not be enough to frame their impact on entrepreneurs' financing. As stated previously, our study established 4 Levels of impact on Financing as presented on Table 3.

Table 3 – Levels of impact on Financing

Level 1	Mentoring Legal support Coaching Training Workshops Business networks improvement Networking to cross areas of knowledge
Level 2	Specialization Global impact
Level 3	Government support Match with investors Partnership with investors
Level 4	Investing Money

By this method of analysis one can better qualify the main issues on Portuguese Entrepreneurial environment.

4.3.1. Level 1 – Improvement

Level 1 is related with projects improvement and development. On a first glance it may seem that is not directly related with financing but in fact, the key need of an entrepreneur is to have a solid project. This relies on having identified an opportunity, have diversity of capabilities on team so as to be able to have capacity and energy of reacting to changing conditions, to be able to test the market and be able to develop indicators of a good traction (such as likes on facebook, follows on twitter, revenues, money raised on crowdfunding, pre-order sales). Only after this basic steps a project can be considered able to be presented to investors. The situation in Portugal is starting to change but generally seems to differ from this perspective. Portuguese entrepreneurs are not fully aware of this previous journey that needs to be done before asking for investment, according to interviewees. The most common mistake is to have an identified opportunity and ask for investment. ESOs have an extremely important role on promoting and changing this awareness, and helping entrepreneurs develop their projects. Developing their projects means to go through this basic steps and not just to build an estimation of sales or business plan.

In fact, almost 60% of our sample have more than 4 out of 7 services provided on projects improvement and business network development. Reinforcing the importance of this Level on entrepreneurs financing success and on ESOs' understanding of crucial aspects in this respect.

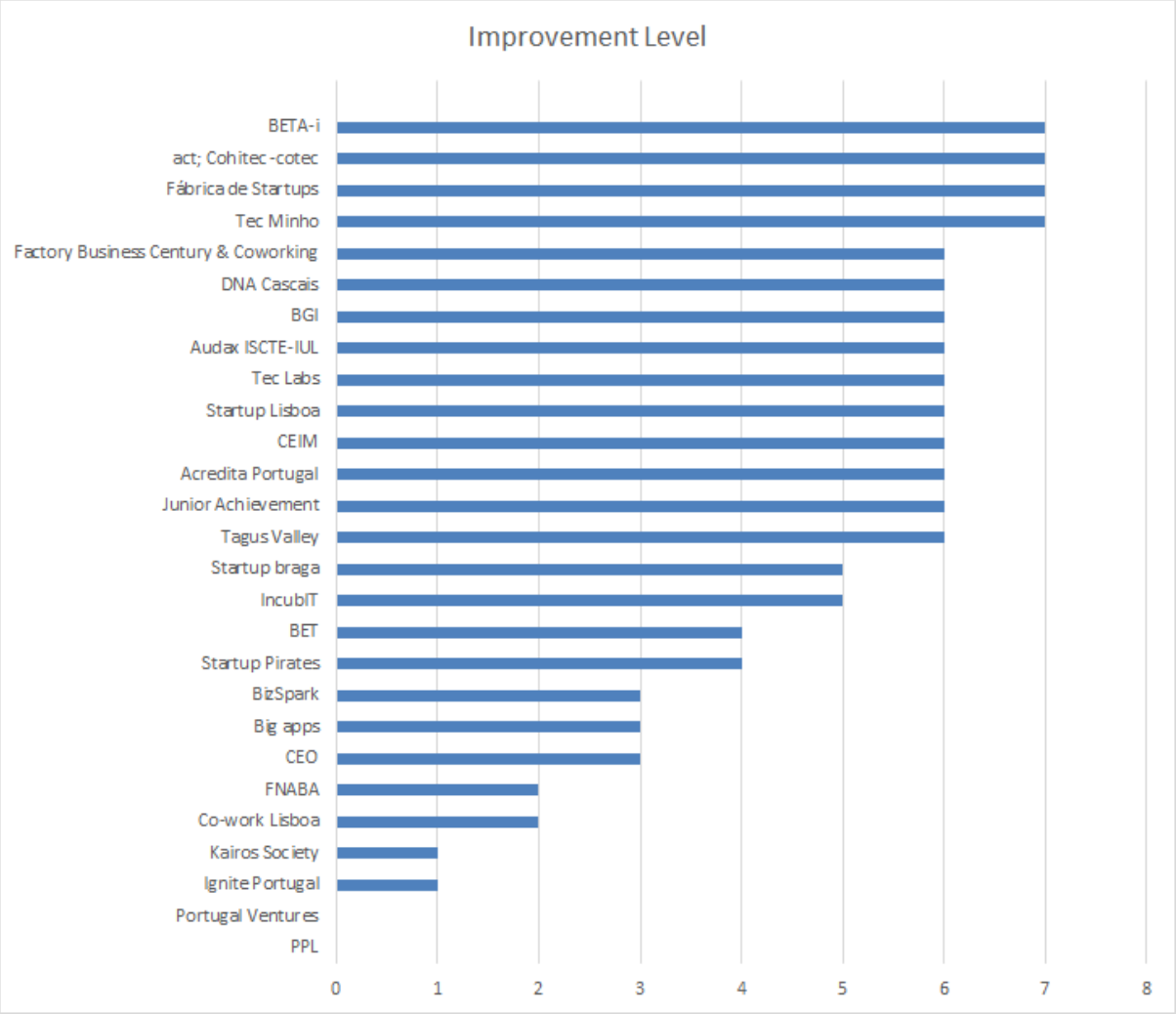


Figure 16 – Number of Services by ESO on Level 1 – Improvement

4.3.2. Level 2 – Specialization and Globalized

The importance of Level 2 – Specialization and Globalized is related with the quality of ESOs' orientation. As stated previously by (Schwartz, Hornych 2008) if one consider the benefits of having a specialized ESO it will be understandable that particular knowledge can be generated, expertise in particular industry and all the know-how created resulted from expertise will leverage ESOs impact on new projects support, as well as, the network creation that will result from that as being the most effective way of support on business networks development or mentoring services. Our study concludes that 70% of sample is specialized either on industry or target. Being technology, biotechnology, web and tourism the most common industries of specialization. Although this sounds to be a huge indicator, there is still a lack of specific knowledge on specific industries providing the ecosystem with a wide set of successful entrepreneurs with experience. Since there

were made distinctions of diverse sets of entrepreneurs[44] and each type associated with different specific needs that should be addressed differently (Chigunta 2002). Regarding target the most common form of specialization is university population either concerning young students with identified potential of incurring in entrepreneurial activity or researchers and investigators that could also bring a significant amount of innovative solutions to the market. Along with this specialization patterns and due to sample's diversity we have naturally specialized ESOs on crowdfunding, venture capital and business angel activities. Specialized ESOs would naturally lack of a broader set of services provided. This point emphasises the fact that merely number of services offered should not be a sufficient measurement of ESOs' quality as previously stated by (Peters, Rice, Sundararajan 2004).

Portugal is considered as a small market with just over 4,5 Million people of employed active population(INE), therefore scalability of business should be directed to international markets (as stated by the majority of interviewees). Hence, if we add the Global exposure offered by ESOs that promotes scalability of projects it will significantly increase their potential rate of success. Considering the data, 93% of ESOs have Local impact. This reflects the primary goal of ESOs on having impact on local communities due in part to their governmental support but at the same time the impact they intent to have on Portuguese economy. This local emphasis promotes employment and migration of knowledge from universities to local industry's needs. Along with this, the global exposure of 81% of ESOs reflects the propensity on having this scalability factor as an identified priority strategy for Portuguese entrepreneurial activity. At this new level, I truly believe that projects will face a substantially higher likelihood of having both national and international interested investors. Despite this result, the number of ESOs that are able to support internationalization of ventures still represents a minority of cases (source: anonymous interviewee). Regarding Figure 17 one can see that there are clearly two realities. The majority of ESOs are positioned on top side of classification being both specialized and global but there is still 44% at a lower level.

[44] Pre-Entrepreneur; Budding-Entrepreneur; Emergent-Entrepreneur on (Chigunta 2002)

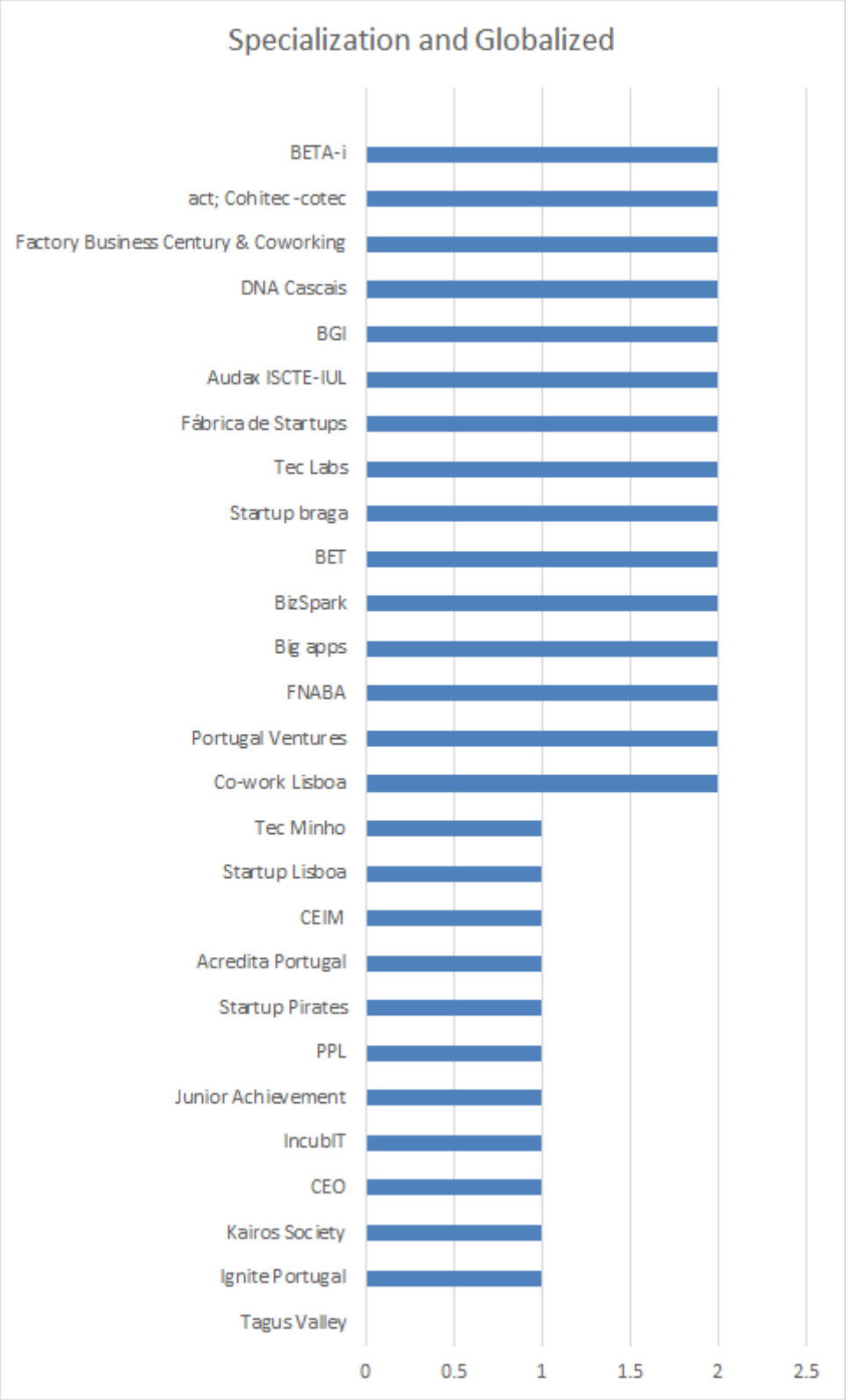


Figure 17 – Number of items covered on Level 2 – Specialization and Globalized

4.3.3. Level 3 – Relationship with Investors and Government

Level 3 of ESOs impact on entrepreneurs financing is composed of 3 different but interconnected factors: Match with investors; Partnership with investors and Government support.

More important than if the connection is made between investors and new ventures, is the work developed in partnership with ESOs and investors. Due to demanding standards of investors, normally entrepreneurs are not prepared to face investor's request (HBAN 2013). In Spain among BA's statistics the success rate of project financed among the contestants is 2%. What applies to Spain applies to all Europe in general, hence to Portuguese reality as well, according to an anonymous interviewee. This emphasises a problem of mismatch with entrepreneurs' and investors' expectations as previously stated with entrepreneurs being too much optimistic on the feasibilities of their ideas or even by information asymmetries (Nosfinger, Wang 2011). In what concerns to ESOs, as close are they to investors and their expectations or their line of thought, the better the service that ESOs will be able to provide to entrepreneurs reducing this gap. In this respect our data identifies that although 89% of ESOs provide match with investor services, only 63% work in partnership or have a close relationship with investors. This identified problem is one of the main problems of ecosystem since the big majority of successful cases of new projects have associated success stories of investment raised throughout venture's life cycle (Leach, Melicher 2011).

Relationship with Government or public institutions represents 59% of our sample and is also important in order to have some institutional ease of process or use of public infrastructures. In some cases it allies knowledge of universities to projects, and also institutional credibility to new projects. In the sense if some project is presented to investors as a project of individual A or B will have less visibility and credibility than if presented as a project on behalf of an Institution (source: anonymous interviewee).

This Level 3 as a whole has clearly 3 patterns of development among the existent sample where 40% are top with all possible services, 37% on the middle and the bottom with 23%. This is definitely the weakest level of our framework because according to investors there is still a lack of work on the partnerships with ESOs in order to dissipate the existent and previously mentioned gap between investors' and entrepreneurs' expectations. On investors point of view there is a substantial work to be done on this regard. ESOs should follow a clear and defined method that lack macro structured view. According to this point of view Governmental institutions

are the ones with the major playing role of defining strategies at the macro level.

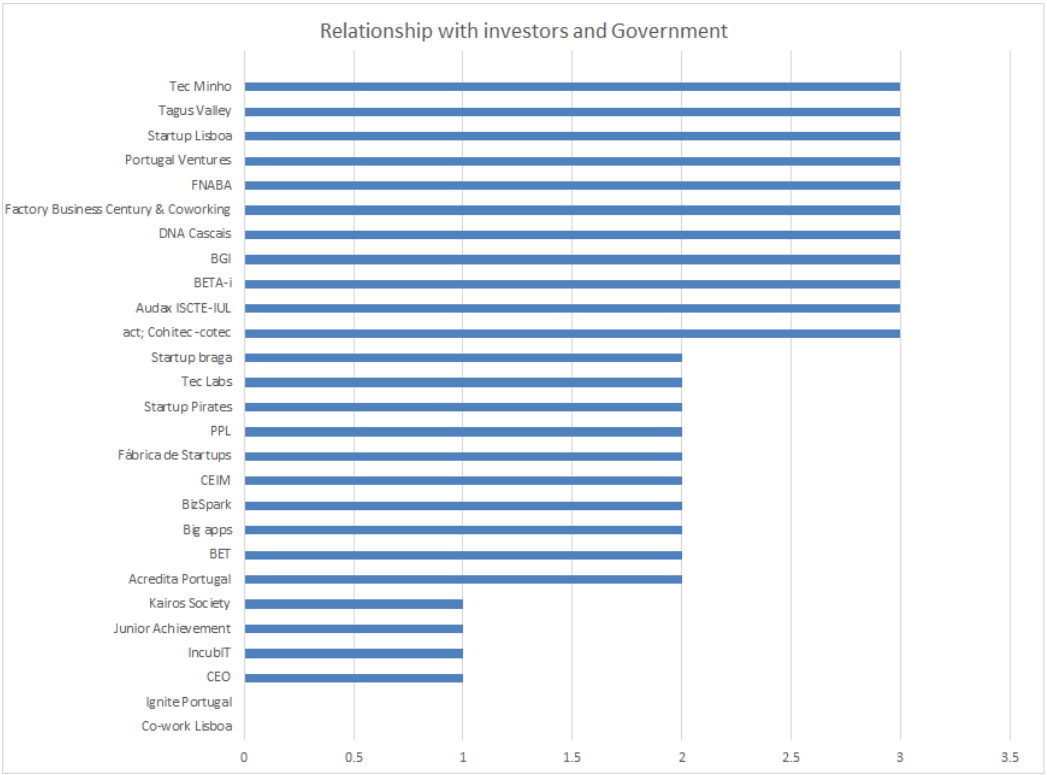


Figure 18 – Number of items covered by ESO on Level 3 – Relationship with investors and Government

This being said, among the studied ESOs those 40% on top of this level are the ones that would have more conditions to change the existent situation, by having a strong relation with investors and government.

4.3.4. Level 4 – Investing Money

Finally Level 4 is composed by investment players of the ecosystem. On this regard one were able to interview and study 3 major players in completely different areas allowing to have the desired level of diversity. The covered areas on financing were Business Angels activity, Venture Capital and Crowdfunding. Our understanding of the ecosystem in this matter is that there is not a lack of funds to invest. The main struggling factor is quality of projects that reach investors. BAs are represented by 15 associations throughout the country. In 2013 Portugal ranked 3rd on BAs investment in relation to GDP among European countries. Portuguese BAs invested more than 18M€ in 95 start-ups on last 3 years. And identified as the main lack of Portuguese ecosystem the amount of projects that reach investors on seed stage along with their quality. Although, in some ESOs' opinion, big capital opportunities are still outside Portugal. On investors' point of view if a company is in place for higher investments is somehow related to the good financing conditions on earlier stages of development (Leach Melicher 2011). In the case of Portuguese BAs and VCs,

they have a solid relationship with international investors, therefore if a Portuguese company does not succeed raising investment inside its country less likely will find investment outside. This reinforces again the idea of lack of cooperation between ESOs and investors. Regarding seed stage investment although there are programs on behalf of "Programa Compete" there is still identified lack of the proper investment due to lack of specialization. This proper investment relates to investments with the potential to increase the number of project creation and with the main goal of projects to reach start-up stage investment. On this particular seed stage investment, universities could play a huge role, namely management universities. On this respect we have successful examples of this programs on UK (source: anonymous interviewee). On crowdfunding, Portugal is still missing the legal framework that will allow crowdfunding as investment or loan and it will be subject to Governmental along with all parties' willingness to approve it on Republic Assembly. At this moment, it is only available donations-crowdfunding model, by this fact, there is not a big incentive to have entrepreneurial business projects in those platforms, since it relies on donations and non-financial, symbolic or even intangible rewards for the crowd. Therefore the big majority of success cases have been on social and cultural projects. In our studied platform the average amount of money raised per project was around 3k with a total amount of 400k successfully raised since 2011.

4.4. Limitations

The main limitation of this study was the lack of comparable information among ESOs that would have been useful to build a quantitative framework of analysis. Ideally it would have been desirable to have information such as investment provided, number of jobs and start-ups supported. But we found a lack of a homogeneous source of data. Moreover the available data would only include in the big majority success stories, which would bias the analysis. On this regard one could only made a qualitative approach to perform this study based on services provided.

The second limitation was precisely related with the first one and relies on the fact that our framework drew conclusions from the comparison of provided services of ESOs. Despite our framework creates different levels of impact on financing and different types of organizations, due to their diversity and complexity also identified by (Valerio, Parton, Robb 2014), it may not be enough to eliminate the generation of errors of analysis that could arise from their natural differences as stated by (Peters, Rice, Sundararajan 2004).

Networking effect is considerably entrenched in every activity an ESO perform. Although one tried to mitigate that risk by recognising Hybrid Organisations, one of the main hitches of this

framework was to split off network effect and to measure it with proper tools. Thus, it could contribute to possible inefficiencies of the study.

The last limitation was the need of having a survey instead of interviews for the last 6 ESOs due to lack of time. That could have biased the data by a self-perceiving problem common on self-evaluation processes called enhancement bias (Krueger 1998). Despite the fact survey was composed of binary enquiry with the intention of knowing their provided services, there could have been an enhancement bias in some cases of questions with dubious interpretation. Nonetheless, one tried to take that into account when designing the survey.

5. Conclusions

Portuguese entrepreneurial ecosystem has evolved significantly in the last 5 years, and is continuously facing a progressive and interesting development. There were identified the major strengths and weaknesses of these ecosystem support players' serving as an overview of the present situation. Our results suggest that Portuguese entrepreneurial ecosystem has the adequate amount of infrastructure ESOs as earlier identified on (GEM Portugal 2012). The big majority of analysed ESOs are considered hybrid organizations which also play education and network role that is found to be crucial on entrepreneurs' project development (Peters, Rice, Sundararajan 2004). Portugal have expertise driven ESOs by being specialized and global Organizations (Level 2 of impact on financing) that ensure to have a higher level of exposure to global markets and are specialized namely on specific industries and targets. ESOs are also well distributed along the entire country enabling impact on local communities which promotes employment and facilitates transference of knowledge from universities to specific local industry's needs. In terms of investment activity, our Level 4 unveils that Portuguese entrepreneurial ecosystem shows strong indicators by Business Angels and Venture Capitalist, having inclusively unused capacity of investment due to lack of projects with the minimum standard of quality. Regarding crowd-funding, there are starting to build legal frameworks for crowd-funding equity platforms that has proven to have significant impact on entrepreneurial activity around the globe.

Nonetheless, were still identified some weaknesses on ecosystem that rely on lack of culture of self-employment and entrepreneurial creation. Also lack of out-reach plan of information and mind-set ignition programs. All factors that reduce the total amount of projects generated along with the quality associated with them. The lack of knowledge sharing and relationship between major players where interactions tend to be residual are also factors that struggles projects' ability to find strong teams partly due to lack of natural networks such as the system of education that does not promote interaction among people from different areas of knowledge mainly on university level. Regarding specifically ESOs' relation with investors (Level 3) it lacks of a deeper partnership. This deeper partnership should reduce the distance between ESOs and investors helping to have ESOs' support methodologies in line with investors' expectations. This would ultimately benefit entrepreneurs' conditions of raising investment. Finally, Portuguese entrepreneurial ecosystem as a whole lacks of a macro structured plan capable of gather all players' potential and transform it in economic benefits for the country. The only macro-structured force that can generate a team out of a group of astounding individuals.

5.1. Implications

5.1.1. ESOs Implications

These findings suggest that ESOs should reinforce the work on their out-reach mind-set ignition activities with the goal of attracting more projects to ecosystem. Once inside, in-reach methods should continue to implement the culture of failure and learn-by-doing. Nonetheless these methods should be aligned with major investors' goals and expectations. For this to happen, Relationship between investors and ESOs should be reinforced in order to promote working partnerships instead of being merely a bridging mechanism between investors and projects.

5.1.2. University Implications

In this context, universities could play a major role in building natural networks to cross areas of knowledge by implementing shared programs, thesis or courses along with all the activity developed by their research centres. These natural networks will stimulate project's success by increasing probability of creation of better teams as well as enhancing the open source culture.

Moreover, management universities could play a role on changing university' lack of self-employment culture and also by establishing investment funds with the main goal of increasing the number of projects that successfully reach start-up-stage investment at the same time solving lack of Portuguese seed stage investment.

5.1.3. Government implications

Government is the player in charge of a country's planning in terms of macro structured programs. Therefore should be responsible for having this role of gathering all major player and stimulate development programs with a well-defined plan of action where each ESO could play his role on the ecosystem acting as part of a team.

Is also from Government responsibility to have a legal framework that promotes entrepreneurial activity, namely on crowd-funding theme and at last an education system in line with entrepreneurial values which should promote the entrepreneurial activity as one possible supporter of economic growth and innovation.

5.2. Future Developments

A possible future development could be a quantitative framework where financial data could be included on evaluation of ESOs performance.

Another possible development would be a complementary approach with entrepreneurs' perspective of the ecosystem by having a strong and diversified sample of national entrepreneurs.

Moreover, due to complexity and heterogeneity of programs and services, ESOs' may not be accurately evaluated by service' distinction (Peters, Rice, Sundararajan 2004). Hence upcoming studies should deepen the framework of analysis by considering specific tools of analysis for specific Organizations (Schwartz, Hornych 2008) such as the ones suggested in (Bergek, Norman 2008).

The impact of co-investment funds[46] on financing conditions of investors such as Business Angels according to EBAN 2012[47] seems to be significant. A further development on this matter should aim to quantify this level of dependence and to identify their pros and cons.

[46] Co-investment funds - Investment mechanism that results from a public-private partnership between the Government and business angels for investments in early stage start-ups.
[47] EBAN 2012 - compendium of co-investment funds with Business Angels

6. Appendices

6.1. Appendix 1 - Interview – guidelines

Demographics

Number of employees

Qualified/Not Qualified?

Area of Knowledge?

Location

Brief history

Partnerships?

What do you think about the ecosystem?

Services provided - Before funding

Kind of Services provided?

Specific management skills?

Specific tech training?

How many projects/entrepreneurs?

Networking?

Crowdfunding?

In which platforms?

Provide access to financial information?

Provide access to business angels/private equity?

Involvement of the government

Services provided - After Funding

Which Kind of Services provided?

Cases of success?

Do keep training/support?

Do you have internationalization as a goal?

Do you feel that we have a lack of smart money of quality in Portugal?

Impact on Employability

How many new companies?

How many new employees? Are they co-founders?

How many? Do they have other job?

Long-term jobs?

How many € provided/facilitated/invested?

Motivation

Do you have any specific Target? Management students? Unemployed?

Entrepreneurship of Need or Opportunity?

Have any specialization on Social? Business? Tech development?

For Investors

What do you think about the ecosystem?

There are missing funding or projects?

Do you confirm lack on pre-seed stage investment?

How do you see ESOs?

How do you see ESOs in:

Improvement (idea, business, team, networks)

Specialization and Global

Relationship with investors

Do you work in partnership with them?

They serve as reducer of the gap between investors and entrepreneur's expectations?

6.2. Appendix 2 – Surveyees List

Surveyees List

Name	ESO
Catarina Correia	Acredita Portugal
Mariana Lino	Junior Achievement Portugal
Pedro Rocha Vieira	Beta-i
Bruno Gomes	Startup Lisboa
	BGI
	Bizspark

6.3. Appendix 3 - Interviewees List

Interviewees List

Name	ESO
Bruno Santos Amaro	TecLabs
Clara Silva	Tecminho
Claudia Barbosa	ISCTE-AUDAX
Francisco Araujo	Kairos Society
Francisco Banha	FNABA
Homero Cardoso	Tagus Valley
Inês Santos Silva	Startup Pirates
José Epifânio da Franca	Portugal Ventures
Karina Costa	Fábrica de Startups
Laura Alves	Co-work Lisboa
Marco Fernandes	DNA Cascais
Marco Lamas	IncubIT
Maria Barba	CEO
Marisa Loureiro	Act-Cotec
Miguel Muñoz Duarte	Big Apps
Miguel Muñoz Duarte	Ignite Portugal
Patricia Dantas de Caires	CEIM
Salvador Burnay Barros	BET
Tiago Gomes Sequeira	Factory Braga
Tiago Gomes Sequeira	Startup Braga
Yoann Nesme	PPL

6.4. Appendix 4 - Data - Services and classification requirements

Mind-set ignition

Includes all events that promote the entrepreneurial mind-set (competitions; school programs; Public workshops)

Pre-University school Education

Includes all events that promote the entrepreneurial mind-set (competitions; school programs; Public workshops)

University Education

Includes all events that promote the entrepreneurial mind-set (competitions; school programs)

General Education

Includes all events that promote the entrepreneurial mind-set (competitions; public workshops)

Professors' Education

All activities that aim to train professors with entrepreneurial teaching skills.

Networks to cross areas of knowledge

Activities (excluding incubation) that provide an exchange of experiences from different areas of knowledge; or networking platforms that aim to join different areas of knowledge

Network events as final Purpose

Dinners; conferences; events that promote networking environment among different players.

Administrative or physical Infrastructures

Physical place for entrepreneurs with access to facilities (meeting rooms; fiscal headquarters; labs) typically incubators;

Improve Business Networks

Match between Suppliers; Clients; Distribution channels, etc. Normally essential on Internationalization business strategies

Legal support

Provide all kind of legal advice and Intellectual property from inside or with a legal partner.

Mentoring

General support on each project with their expertise acquired by their experienced career, normally external to ESOs.

Coaching

High level of specialization and support on each project; normally belong to ESO structure or have a day-to-day relationship with the projects.

Training

Planned and structured program; main goal is to provide entrepreneurs with a tool; business plan development; social media communication;

Workshops

One-off event; specific tools on specific topics of entrepreneurs' interest.

Internally developed methodology or external adopted

Bring University's knowledge to market

Activities that aim to attract researchers to develop a market product (phd or MBA students; research foundations)

Match with investors

Facilitate the match between investors and entrepreneurs; provide support on calls of investment; organize competitions with final pitch with investors.

Partners with investors

Work in partnership with investors; improve and develop pre-identified promising start-ups; have close relationship with investors.

Specialization

Have a specialization in an industry; For instance, Tech; Biotech; Music; Tourism; Health; Web; or in a stage of development for instance, Youth; Start-up 1.0; seed-stage; pre-seed stage; B2C; B2B.

Local impact

Have impact on local economies; aimed to develop local projects with projects for local markets.

Global impact

Have impact on global economies; aimed to develop global projects with products for global market; programs in other countries.

Social impact

Have impact on social project-development; facilitate or cooperate with some ONG.

Networking Partners of other ESOs

Essentially are communication partners of other ESOs by helping to leverage the communication of particular events.

Work in partnership with other ESOs

Work in partnership with other ESOs by incubating projects from other ESO or co-organizing events with other ESOs; provide mentors for events; give workshops in other ESO

Government support

Every type of support from Public Organizations. From Government, Public Universities, to city councils.

6.5. Appendix 5 - Survey

As perguntas que se seguem têm como objectivo uma resposta fechada, isto é, ou Sim ou Não. De forma, a que o resultado desta investigação chegue a conclusões fidedignas é pedido total sinceridade nas respostas. Queremos desde já agradecer a sua disponibilidade.

1. Desenvolve algum tipo de actividades que promovam o mind-set empreendedor, desde competições, programas escolares ou workshops públicos tendo em vista a educação? (S/N)

1.1. Se sim, têm algum tipo de público alvo especifico como;

1.1.1. pré-universitário; (S/N)

1.1.2. universitário; (S/N)

1.1.3. pessoas em geral; (S/N)

1.1.4. capacitar professores (S/N)

2. Desenvolvem actividades (excluindo a incubadora) que promovem a troca de experiências de diferentes áreas de conhecimento; ou plataformas que têm como objectivo cruzar pessoas com diferentes áreas de conhecimento. (S/N)

3. Desenvolver qualquer tipo de actividades em que o objectivo único seja o networking? Como por exemplo: Jantares; conferencias; eventos que promovem o ambiente de network a vários players. (S/N)

4. Têm um Espaço físico para empreendedores com acesso a infraestruturas que possa ser sede fiscal da empresa (sala de reunião; sede; laboratórios) tipicamente uma incubadora (S/N)

5. Estabelecem a ligações entre as startups e possíveis clientes; fornecedores; ajuda a encontrar linhas de distribuição; ou apoiam à internacionalização; (S/N)

6. Fornecem todo o tipo de apoio legal ou apoio de protecção de propriedade intelectual com pessoas da organização ou através de parcerias com escritórios de advogados (S/N)

7. Fornecem serviços gerais de mentoria estratégica às startups através de pessoas com elevada experiencia numa determinada industria ou área, normalmente mentores externos (S/N)

8. Fornecem serviços com elevado nível de especialização e suporte em cada projecto ;normalmente pertencem à organização e assistem o dia-a-dia das startups. (S/N)

9. Têm um programa estruturado e planeado em que o principal objectivo é fornecer uma ferramenta aos empreendedores, desde o desenvolvimento do plano de negocio; a planos de comunicação, planeamento de custos, etc. (S/N)

10. Realizam workshops específicos para promover conhecimento em áreas especificas; marketing digital; como fazer um bom pitch, etc. (S/N)

11. Utilizam uma metodologia que foi desenvolvida internamente? (S/N)

11.1. Caso tenham adoptado uma metodologia externa por favor esclarece-nos qual.

12. Desenvolvem actividades que têm como principal objectivo atrair os investigadores e o seu conhecimento para o Mercado. Nomeadamente alunos de Doutoramento (PhD) que trabalham em centros de investigação. (S/N)

13. Facilitam a ligacão com os investidores e empreendedores; através de concursos onde o juri é um potencial investidor; facilitam o processo de candidatura aos programas de financiamento do estado. (S/N)

14. Trabalham em parceria com investidores com o objectivo de melhorar as startups para que estas cumpram os requisitos dos investidores normais; isto é, têm uma relação muito próxima com os investidores. (S/N)

15. São especializados numa industria; tecnologia; musica; turismo; saude; ou numa fase de desenvolvimento; seed; pre-seed; Por favor especifique.

16. Pretendem ter um impacto na economia a que nível?

16.1.1. Local (S/N)

16.1.2. Global (S/N)

17. Têm programas de apoio a instituições sociais ou a promoção de organizações de carácter social? (S/N)

18. São principalmente parceiros de comunicação das outras organizações de empreededorismo? Cooperação na comunicação conjunta de eventos. (S/N)

19. Trabalham em parceria com outras Organizações de empreendedorismo no qual fazem incubação de projectos oriundos de outras organizações ou fornecem mentores para eventos, ou criam eventos em parceira? (S/N)

20. Têm algum tipo de apoio de organizações públicas? Desde Governo, Universidades Publicas ou Camaras Municipais. Qualquer tipo de apoio. (S/N)

Muito Obrigado

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