

Facilitate Success for Others or up the Stakes and Claim it Yourself Accelerators in Startup Finance

Oscar Coster^α

Manfred Ortmaier^β

Abstract

This paper is an exploratory study based on 30 qualitative interviews that outlines the selection and financing patterns of accelerators. It identifies the key criteria evaluated in the selection process of accelerators as the team, idea and program fit in this order. Furthermore, the thesis outlines the basics of how accelerators finance startups, handle information asymmetry and perform the valuation. A five-staged categorization of financing sophistication of accelerators is proposed. Moreover, the thesis confirms the existence of a funding gap after the portfolio companies leave the accelerator, which causes a trend towards increased and later-staged investments by accelerators in their portfolio companies.

^α40371@student.hhs.se

^β40395@student.hhs.se

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Tutor: Michael Halling

External Tutor: Maximilian von Zedtwitz

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1. Introduction

1.1 Background

Business incubators have been playing an important, yet controversial role (Ratinho, Harms, and Groen 2013; Schwartz 2013) in the startup scenery within the last decades. As primarily not-for-profit organizations,¹ incubators provide a supportive environment to startups with the goal of promoting job creation, economic development and technology transfer (Peters, Rice, & Sundararajan, 2004), offering a broad range of services in order to foster incubation, such as office space, shared administrative services and equipment, coaching and access to network and capital (Zedtwitz 2003). By selecting the right startups, supporting their businesses and connecting the startup to individuals depending on the startups' needs, the incubator intends to raise successful startups (Bergek and Norrman 2008). With the burst of the internet bubble, the classical incubator business model lost importance as startup funding dried up in the years after 2000, which forced many incubators to go out of business or to switch to a business model with stronger emphasis on generating revenues² (CSES Centre for Strategy & Evaluation Services 2002).

With the downturn of the incubator business model, a new, but similar business model has emerged. The first one founded in 2005, accelerators have steadily increased in numbers in recent years³. Generally, the main differences between accelerators and incubators are that accelerator programs i) are limited in time, ii) take in batches ("cohorts") of startups iii) have a stronger incentive to help their startups as they take on equity iv) put more emphasis on education for the participants and iv) offer a more extensive mentorship network (Cohen 2014). However, because of the novelty of the accelerator phenomenon, hardly any research has been conducted on this topic. This

¹ Around 93% of NBIA members are not-for-profit organizations. The NBIA is North America's largest business incubator network (http://www.nbia.org/resource_library/faq/#4)

² For example by offering consulting services or by charging for more rent

³ While the number of accelerators globally is not being known and difficult to assess given the different perceptions in the term "accelerator", it is estimated that there are around 300 to 2000+ accelerators globally.

paper is intended to offer a better understanding of the selection and financing of the accelerators' portfolio companies.

1.2 Scope and Research Questions

Although many published studies elaborate on how startups are selected by venture capitalists (VCs) (Fried and Hisrich 1994; Kaplan, Sensoy, and Strömberg 2009; Wiltbank and Sudek 2009)⁴, almost no research has been conducted on the selection criteria of accelerators. In particular, research has concluded that VCs focus on team, idea and results (Fried and Hisrich 1994) and should place more weight on the business than on the management team when selecting their investment objects, given the prevalence of their initial business idea over time (Kaplan et al. 2009). However, Kaplan et al. (2009) focus on rather mature startup companies⁵. Therefore it is questionable if the preference for the idea over the team also holds for accelerators, leading to the first research question.

Research question I: How are accelerators selecting their startups? Is the idea as a selection criterion more prevalent than the team?

In addition, an important part of the accelerator business model is to help the startups raise financing. This is done through: i) making the startups investment-ready, ii) connecting them to capital and iii) investing in the startups themselves.

Research question II: Why and how are accelerators investing in their portfolio companies? How can accelerators be categorized in terms of investment patterns and will such patterns change over time?

Moreover, given the recent emergence of new startup support organizations, particularly the recent decline in incubators and emergence of accelerators globally, one might assume new changes in the industry in the next years. As part of this research, it will be tried to evaluate the accelerators' position in the industry.

⁴ Also see (Carter, R.B. & Van Auken 1992; Dileep, H., Miller, A.T., & Bowman 1992; Haar, N.E., Starr, J., & MacMillan 1988; Jensen 2002; Macmillan, Siegel, and Narasimha 1985; MacMillan, Zemmann, and SubbaNarasimha 1987; Van Osnabrugge 1998; Sudek 2005; Tyebjee and Bruno 1984)

⁵ Median company is 23 months old as of stated in the business plan

1.3 Limitations

1.3.1 Data Deficiency

There are limitations to this study. Firstly, the lack of quantitative data means that measuring performance of accelerators is near impossible, thus this study will not try to do so. Furthermore, this data shortage also implies that it will not be possible to broadly study the accelerator phenomenon using statistical models to determine if certain practices related to the research questions are superior. Moreover, the data available from other sources are largely based on self-reported data submitted to various databases such as Seed-DB and GAN(GAN 2014; Seed-DB 2014). As the non-biasedness of these sources cannot be guaranteed, statistics from these databases will be used for illustrative purposes only.

1.3.2 Ambiguous Accelerator Definition

The accelerator term is widely used for startup assistance organizations with various actual practices even though efforts of characterization have been done in literature, the industry practitioners are not fully aware of what is considered an accelerator. Consequently, this thesis will take its basis on a definition that is partly self-created.

1.3.3 Subjective Responses

As with the data reporting to accelerator databases, the actual interview responses on this thesis relies on are subjective to the interviewee at the accelerator and might neither fully represent the practices nor the reality of the accelerator.

1.3.4 Low Amount of Published Research on Accelerators

Because the accelerator concept is new, there are few published papers and articles describing the accelerator phenomenon. In terms of the accelerators' selection and financing of startups, almost no literature is available for study. Therefore, this thesis will be of exploratory nature and will also try to link the research to other organizations similar to accelerators, such as venture capital investors, angel investors and incubators.

1.4 Outline

This paper will begin in Chapter 2.1 by explaining the accelerator phenomenon, how it emerged, its relation to incubators and the definition of what constitutes an accelerator. Moreover, an overview of the research done on accelerators will be presented. Thereafter, in Chapter 2.2, the paper will outline the basis for the first research question related to the selection of startups and how the accelerator startup selection relates to other organizations that finance startups, such as venture capital and angel investors.

Furthermore, in Chapter 2.3, the background to the second research question about startup financing will be outlined, taking its standpoint in classical problems related to financing as well as investing and how to alleviate them. This chapter also explores how the financial market for startups works; which problems are associated with the market and who the key actors on the market are. Finally, the accelerators' role is summarized using recent research.

In Chapter 3 the methodology for the paper is outlined starting with the choice of the research area. Furthermore, the choice of the methodology with its limitations is explained, the interview structure is highlighted and the sample is outlined.

Chapter 4 will contain the findings and discussion of this research. Chapter 4.1 gives an overview of the selection processes and criteria employed by accelerators as highlighted in the interviews. Special attention will be paid to the issue of team versus idea, but other selection practices will also be summarized. In Chapter 4.2 the accelerator startup financing patterns are outlined. After outlining the valuation process of accelerators in 4.2.1, Chapter 4.2.2 highlights a trend in accelerator startup financing through a five stage model, in which the accelerators are mapped according to the maturity of their financing and investment processes. Furthermore, examples of different practices are highlighted and reasoned for using the interview material in conjunction with previous research. Additionally, the reasoning for moving towards more mature financing is also explained.

Finally, in Chapter 5, a summary of the results is given and the results are discussed in the context of previously provided literature on startup selection and financing. Moreover, the study and its properties will also be discussed, combined with suggestions for future research.

2. Theoretical Background

2.1 Accelerators

2.1.1 History of Accelerators

The history of accelerators begins with the foundation of the first accelerator, Y Combinator, in Boston, Massachusetts, in 2005 by Paul Graham. In 2006, David Cohen founded Techstars in Boulder, Colorado, with the goal of improving the regional startup ecosystem. The same year, Y Combinator moved its activities to the San Francisco Bay Area and Silicon Valley. These two accelerators are role models for the estimated 300 – 2000 accelerators active today (Cohen 2014). Techstars has employed a franchise-like business model with affiliates in 11 cities.

The core focus of accelerators, including Y Combinator and Techstars, has traditionally been on tech startups and specifically web applications. However, recent trends suggest increased vertical specialization, most notably into healthcare and education, but also into other areas such as gaming (Seed-DB 2014). There has also been a substantial regional dispersion of accelerators from the traditional tech clusters, such as Silicon Valley, to most major cities in the U.S. and Europe (Seed-DB 2014).

2.1.2 Research on Accelerators

It is important to note that the definition of what constitutes an accelerator program is discordant. Not only is the term used for a variety of different institutions and programs, including incubators, but it is also a source of confusion for entrepreneurs and researchers alike. The rather negative connotation of the term “incubator” incurred during the dot-com era could give incentive to incubators to try to rebrand themselves accelerators, without changing their incubator business model into an accelerator model. Moreover, researchers looking for data on accelerators are at a constant struggle trying to manually distinguish between heterogenic types of organizations under the epithet “accelerator”.

Moreover, since the phenomenon accelerator originated in 2005 there is a chronic lack of published research, which is further limited by the lack of reliable data in the accelerator field. As the core focus of accelerators is early stage startups, few accelerators have had any exits on which success can reliably be measured. Recently,

some attempts of categorizing and measuring performance of accelerators have come from the U.S. Seed Accelerator Rankings, which are compiled annually. These rankings provide an ordinal view on the top accelerator programs in the U.S. as well as summary statistics on which research can be based (Hochberg and Kamath 2012).

Some noteworthy recent publications in the accelerator field are: Cohen (2014), defining the accelerator and its similarities and differences with other startup support organizations such as incubators and business angels. Miller & Bound (2011) gives an overview on accelerators in Europe generally and the U.K. specifically. It also provides a definition of accelerators and highlights key benefits extended to startups by the accelerators. Christiansen (2009) outlines a framework for setting up a successful accelerator, based on the business model employed by Y Combinator. Kim & Wagman (2012) look at accelerators from a social welfare perspective and conclude through game theory that it could be beneficial for the accelerator to seclude negative information about startups to boost the value of their own investments. This questions the signaling effect provided to startups through the participation in an accelerator. Hoffman and Radojevich-Kelley (2012) conducts a case study on five accelerators outlining their practices on selection processes as well as the benefits of accelerators to startups. It also emphasizes the importance for accelerators to facilitate a connection between the startups and potential investors. However, reliance on a small sample calls the study's consistency into question.

2.1.3 Defining the Term Accelerator

Accelerators are active in the seed and startup stages of company development and usually focus on assisting startups in the first stages of their development; defining the business model, testing prototypes, identifying customers and securing capital and key employees (Cohen 2014). To assist startups in these areas, the accelerator brings a cohort of founders to the accelerator premises for a set amount of time, usually around 3 months. During this period, startups are offered an array of different benefits, such as office space, coaching, mentorship and education. Furthermore, the startups are usually offered capital, to sustain them during the program, in exchange for an equity ticket in their company (Miller and Bound 2011). Moreover, there are also immense networking opportunities with other founders, mentors and accelerator employees, as well as with investors in the form of venture capitalists and angel investors. The culmination of the program is a presentation day or “demo day” where the accelerator

invites providers of financing, such as venture capitalists and angel investors to survey the startups and make investments based on their progress so far (Cohen 2013).

Table 2.1 depicts a definition of the term accelerator based on the current research and on the definitions outlined by S. G. Cohen (2014) and Miller & Bound (2011).

Table 2.1: Defining Criteria of an Accelerator

- Open and selective application process
 - Fixed-term, cohort-based program
 - Provision of capital, usually in exchange for equity
 - Focus on teams, not individuals
 - Ending with a demo-day with presentation to investors
-

Many of the features of an accelerator are also prevalent in other startup support organizations, most notably angel investors and incubators. Like accelerators, these organizations offer similar services to startups; in the case of incubators: office space, office support, access to financial resources, business support and access to networks (Zedtwitz 2003). However, incubators generally do not offer financing in exchange for equity, but rather charge rent from their tenant companies. Furthermore, incubators do not have a set program life and a well-defined end to the incubation period. Angel investors, like accelerators, extend financing and some mentoring to early stage startups. However, angel investors do not provide office space and education (Zider 1998). A comparison among accelerators, business angels and incubators is outlined in Table 2.2 below.

Table 2.2: Differences between Incubators, Accelerators and Angel Investors

	Accelerators	Incubators	Angel investors
Duration	3 months	1 – 5 years	Ongoing
Cohorts	Yes	No	No
Revenue source	Investment	Rent	Investment
Selection	Competitive, cyclical	Non-competitive	Competitive ongoing
Education	Seminars	Ad hoc	None
Location	On premises	On premises	Off premises
Mentorship	Constant, intense	On-demand, tactical	As needed, by investor

Based on Cohen (2013)

There are also differences within the accelerator category. The most common sources of flexibility are the length of the program, the industry vertical, the geography, the level of initial and possibility of follow-up funding as well as the structure of the educational program (Christiansen 2009).

2.2 Startup Selection

Unlike literature on how VCs and angel investors select their portfolio companies, there has been little research on accelerator selection practices. Therefore, the selection process of VCs and angel investors will serve as a basis for the reasoning in this thesis.

According to the evolutionary approach of entrepreneurship, startups are undergoing organizational change. The process of variation, selection and retention drives change in organizations and organizational routines (Aldrich 2002). While it is mainly the entrepreneur who by founding a company, pursuing different strategies or combining different assets, generates variation (Aldrich 2002), it is primarily financial intermediaries that by allocating external resources make the selection of companies (Anderson 1999). Venture capital companies have been cited as important selectors of startups. This selection is performed not only by allocating resources among startups, but also by favoring promising ones (“scouting”) and requiring them to adopt certain

characteristics (“coaching”) (Baum and Silverman 2004). Given the VCs ability to identify particularly promising startups, they act as “informed agents” that provide positive signaling benefits for the startup that helps the startups to obtain other resources (Megginson and Weiss 1991).

2.2.1 Selection Criteria for VCs

The selection criteria used as basis for investments by VCs builds on three pillars, the *idea* (concept), *team* (management) and *returns* (Hisrich and Jankowicz 1990). Furthermore, Hisrich & Jankowicz (1990) also found that the respondents favored the idea and the team over the return aspect and that investing VCs even take the results for granted in some cases. Moreover, the study also concludes that VCs rely on ‘gut feeling’ to a large extent in their investment decision making.

Table 2.3: Key Criteria for VC Investment

Idea	Team	Returns
Earnings growth	Personal integrity	Substantial scalability
Working and market ready concept	Track record and experience	High hurdle rate
Competitive advantage	Flexibility and business understanding	Realistic exit opportunities
Acceptable capital requirements	Leadership	

Based on Hisrich & Jankowicz (1990)

Expanding on the three pillars, Fried & Hisrich, (1994) finds more developed criteria. The *idea* has four basic components: Firstly, possibility of future earnings growth and high IRR⁶, either through a rapidly expanding market, potential for significant market share and/or substantial reduction of costs. Secondly, the investment must involve a concept that works and can be market-ready in 2-3 years. Thirdly, the idea must offer a competitive advantage over current offerings. Fourthly,

⁶ Internal Rate of Return

the idea must come with capital requirements that can be met by the investor (Fried and Hisrich 1994).

The *Team* must also possess certain criteria in order to be successful. Firstly, the personal integrity of the team is an important factor. Secondly, the team should have a successful track record, preferably unrelated to the current startup. Thirdly, the team should be hardworking, flexible and have a strong technical and business understanding of the market and the startup. Fourthly, managers must display leadership or be willing to lose operation control once more sophisticated leadership skills are required (Fried and Hisrich 1994).

Returns have three parts. Firstly, there has to be substantial scalability in order to ensure high absolute returns. Secondly, there must be an opportunity for a high hurdle rate, on which VCs are compensated. Thirdly, the venture must have a realistic exit opportunity somewhere in the three to ten year span (Fried and Hisrich 1994).

Furthermore, relating to two important criteria for VCs, the team and the idea (Hisrich and Jankowicz 1990), Kaplan et al (2009) concluded that VCs should rather bet on the “horse” (i.e. the idea) than on the “jockey” (i.e. the team) when selecting startups as the idea is more persistent over time going from a business plan to a public company. In essence, the reasoning behind this preference is that company strategies rarely change, while management turnover is high.

2.2.2 Angel Investors Compared to VCs

Apart from VCs, other financial intermediaries such as angel investors and accelerators also have an important role in selecting the right companies (Cohen 2013).

VCs are said to have a more objective perspective on financial return, focus more on return on investments and are emotionally less attached compared to angel investors. In comparison to VCs, angel investors have different investment patterns. Sudek (2005)⁷ states that “angels perform less professional due diligence for their investments, invest more opportunistically, rely more on instincts and do not calculate

⁷ See also (Baty 1991; Mason, C.M. & Harrison 1996; Van Osnabrugge and Robinson 2000; Timmons 1990)

internal rates of return”. Moreover, angels are generally more involved with startups than VCs (Benjamin and Margulis 2000).

According to Sudek (2005), U.S. angel investors rank team criteria such as trustworthiness of the entrepreneurs, the management team and the enthusiasm of the entrepreneurs as first, second and third most important selection criterion. In comparison, in a similar study on U.K. angel investors, enthusiasm, trustworthiness and revenue potential were cited as most important factors (Osnabrugge 1998).

2.3 Startup Financing

Innovation as a generation of information is a risky process, in that the output cannot entirely be predicted based on the information of the input. Given the high risk, many investors refrain from investing in inventive and research activities (Arrow 1962). The main problem of innovation is that the information generated is non-rival: As information cannot be kept completely secret over time, the entrepreneur cannot fully appropriate innovation, leading to underinvestment in Research and Development (R&D) (Hall and Lerner 2009). The incomplete appropriability of entrepreneurial R&D investments, can be solved by other means such as intellectual property protection, subsidies and tax incentives (Arrow 1962).

Nonetheless, even if innovation can be secured with property rights, underinvestment is still taking place as the cost of capital is too high given the investors level of uncertainty regarding the invention (Hall and Lerner 2009). There is often a wedge between the required return of entrepreneurs and external investors. Differences between external and internal cost of capital of innovation can be related to i) asymmetric information ii) moral hazard and iii) tax considerations⁸ of external finance versus internal financing (Hall and Lerner 2009).

2.3.1 Asymmetric Information – Entrepreneur and Investor

Because the entrepreneur has better information about the likelihood of success of an idea than third parties, the market for investing in innovative ideas resembles the “Market for Lemons”: Both good and bad (lemons) investments are traded at the same

⁸ Not described in this paper

price as the quality is only known to the entrepreneur. The investor then has to assume average quality given the uncertainty. Consequently, good investments are locked in and not traded (Akerlof 1970).

Venture capitalists, as specialist financial intermediaries, overcome information asymmetries by intensively scrutinizing the startups. Venture capitalists play an important role in mitigating the agency conflicts by actively monitoring and advising, screening diligently, providing incentives to exit, syndicating with other investors and staging the investments (Hall and Lerner 2009; Kaplan and Strömberg 2001).

The implications of asymmetric information are even more severe for young firms, particularly in the high-tech industry (Hall and Lerner 2009). Entrepreneurs can overcome the market failure of ideas being conceived as “lemons” by signaling. Investing in their own startups, for example, is a very effective, yet costly way of signaling the quality of a venture to external investors (Leland and Pyle 1977).

“Given their limited operating history, startups are arguably the most informationally opaque firms in the economy. Consequently, it is generally believed that startups, due to potential difficulties in obtaining intermediated external finance, are heavily dependent on initial insider finance.”

- G. Cassar (2004)

To reduce the effect of information asymmetry, investors and entrepreneurs use a variety of methods, such as track record, control, collateral requirements or covenants and signaling (Cassar 2004). As early stage startups lack both track record and collateral to post, the signaling effect of the reputation of the startup is an important factor in fundraising (Cassar 2004). Moreover, startups can choose to target informal investors that are more acceptant towards such risk. The two main groups of informal investors are: i) Friends and relatives⁹ and ii) angel investors (Scholtens 1999).

⁹ In practice depicted as the 3Fs (i.e. friends, family and fools) or the 4Fs (i.e. friends, family, fools and founders)

2.3.2 Moral Hazard in Startup Financing

The agency problem exists because of the separation of ownership and management. The principle-agent problem states that a conflict between the agent and the principle (i.e. the entrepreneur and the investor in that case respectively), can result in investment strategies that are not shareholder value maximizing. Thus, if the ownership is separated from the entrepreneur (agent), entrepreneurs generally spend resources on activities that benefit them and not necessarily the investor (Hall and Lerner 2009). In addition, entrepreneurs become less incentivized when ownership is transferred to outside investors. One solution to the agency problem is the long-term alignment of incentives (Hall and Lerner 2009).

2.3.3 Financing Stages

Financing for a venture comes in different forms and has different sources depending on the maturity of the venture. Table 2.4 displays the stages a typical, successful venture passes (Sahlman 1990). However, the borders between the different stages are fluid and there are no clear-cut distinctions of companies at different stages. Even though the processes and products have changed over time, financing phases of startups have remained consistent.

Table 2.4: Stages of Venture Investing

1 Seed Investment

The strict definition of seed investment is a small amount of capital provided to the entrepreneur in order to evaluate whether the idea is feasible and worthy of further investments. Typically the capital is used for prototyping and testing the idea. However, this stage does not involve commercial production.

2 Startup

The recipient company is usually less than one year old. The capital is used for product development and testing, market and customer research as well as team building and refinement of the business plan.

3 First Stage – Early Development

Investment in this stage is only granted upon proper display of proof of concept for the product or prototype. Moreover, the market studies must look good enough for production on a commercial level. Capital is used for initialized commercial manufacturing. Companies at this stage are usually not profitable.

4 Second Stage – Expansion

Companies in this stage have a high enough volume to have real market feedback. However, there is still uncertainty regarding market penetration and speed. Companies at this stage are usually unprofitable or marginally profitable.

5 Third Stage – Profitable, but Cash-poor

The companies are growing rapidly and have reached profitable margins. The capital is used for production, marketing and improving the product or service. This is usually the first stage where banks can realistically be involved in financing.

6 Forth Stage – Rapid Growth Towards Liquid Point

At this stage, the companies are stable and capital is mostly used for growth. The success of the company has reduced much of the risk to outside investors. Companies commonly opt for a shift towards debt financing in this stage to reduce equity dilution. Although successful, the cash-out options and timings are still not known to the investors.

7 Bridge Stage – Mezzanine Investment

In this situation, the companies have an approximate estimate on how and when they can exit. However, the exit is still subject to uncertainties ranging from stock market valuations to interest rate levels. Commonly, companies at this stage restructure their capital table, possibly cashing out earlier investors or management.

8. Liquidity Stage – Cash-out or Exit

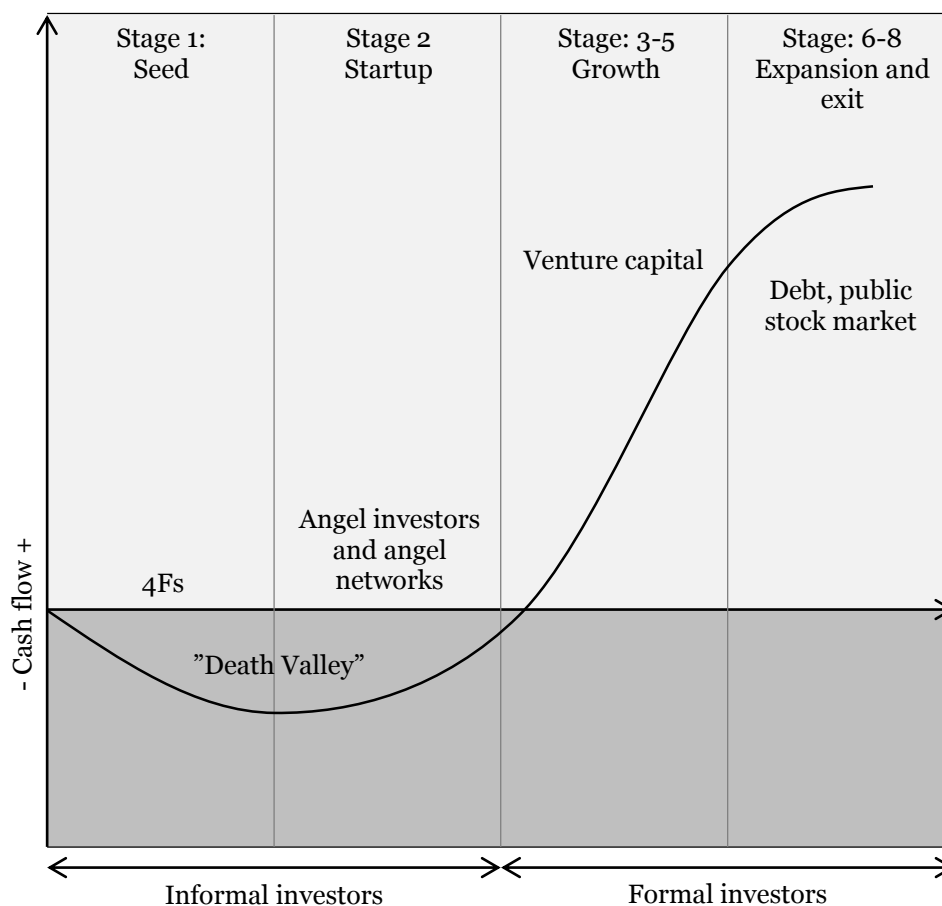
During the liquidity stage, the investors have the first opportunity to liquidate a large part of their holdings in the company. This is usually done through an IPO or sale to a strategic or financial buyer. However, depending on the form of the exit, the proceeds might not be fully liquid and can instead be in the form of equity in another company or short-term debt.

Based on Sahlman (1990)

2.3.4 Financing Sources

Securing funding is an important objective for all startups. The failure rate for companies that are not able to attract funding within three years is ninety percent (Lerner and Gompers 2002). However, attracting funding can often be hard, especially for early stage companies that lack tangible assets and cash flows. These startups have to resort to less formal means of financing (Cassar 2004). This state corresponds to the previously described stages: ‘Seed’ and ‘Startup’ where informal financing is primarily prevalent (Kotha and George 2012). In startup linguistics, this phase is commonly referred to as “Death Valley”, indicating the high chance of startups failing in this phase. Figure 2.1 shows the development of a startup and the different sources of financing associated with each stage (Gudov 2013; Stage 2002).

Figure 2.1: Startup Financing Cycle



Based on Gudov (2013) and Sahlman (1990)

In the ‘Seed’ stage, startups often employ ‘bootstrapping’, defined as the process of acquiring capital without borrowing or raising equity financing (Freear, Sohl, and

Wetzel 2002). Investors at this stage are the founders along with family and friends (and fools) (4Fs). In the 'Startup' stage, the primary providers of capital are the angel investors (Freear et al. 2002). The 4Fs extend financing through loans or common equity where angel investors often receive common equity in exchange for their investments. Venture capitalists are more senior in terms of phase maturity and work with a variety of different financial instruments, such as convertible debt, preferred shares and options (Kaplan and Strömberg 2004). Venture capital, which is considered a formal source of financing, differs from the informal sources because of more clearly defined return requirements. Another key characteristic is the high fixed due diligence costs incurred by the VC funds to protect their interests, which limits venture capitalists to larger investment amounts and repeated investments in the same companies (Freear et al. 2002).

It is worth highlighting how rare access to formal financing sources actually is. In the Global Entrepreneurship Monitor (GEM) report from 2012, it is concluded that entrepreneurs need a median level of \$15,000 for a new venture and that 82% of this amount is supplied by informal financing sources (Kelley et al. 2012).

Other sources of formal financing, such as bank debt, is often not attainable for startups at this stage because of the uncertainty of the outcome (Sahlman 1990). Other sources of financing, especially prevalent in the EU, are different types of public grants or loans extended to startups (EVCA 2010). These are usually granted to generate business and job opportunities and are often combined with different incubation programs. Moreover, the seed and startup stages are also the stages that are targeted by accelerator and incubator programs.

2.3.5 Financing Gaps

As previously concluded, financing for startups comes from different sources at different stages of the startups' development. However, raising financing can be hard because of the information asymmetry and potential moral hazard as well as the capital bottlenecks that exist. These bottlenecks, referred to as financing gaps are common sources of startup failure (Papadimitriou and Mourdoukoutas 2002).

The first financing gap is in the seed and the startup stage, where the company is increasingly shifting funding sources from bootstrapping or 4F financing, to angel investors or VCs (Papadimitriou and Mourdoukoutas 2002). In monetary terms, the

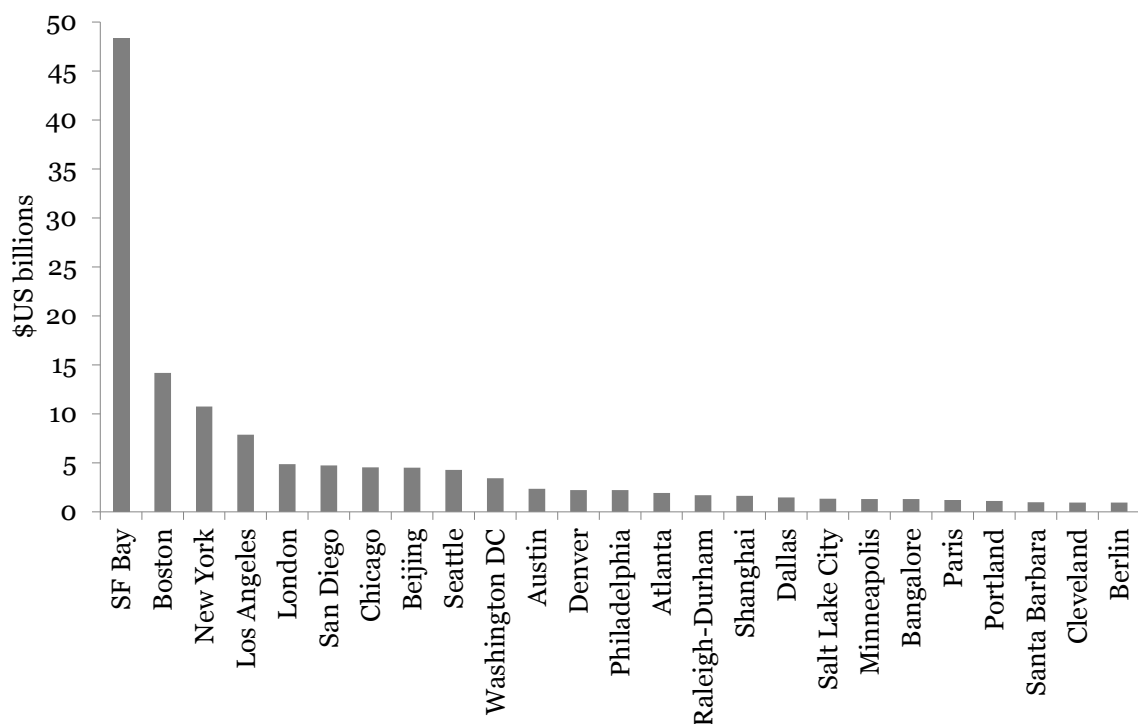
gap spans between the \$100,000 approximate upper limit of 4F financing and the \$2 million approximate lower limit of formal venture capital financing (Freear et al. 2002). This gap typically relates to information asymmetry where outside investors, in the form of angel investors, are brought in for the first time. The information gap is further accentuated by the desire for many angels to remain at least partly anonymous to avoid 'business proposal flooding' (Lam 2010). However, evidence suggests that this financing gap can be mitigated by entrepreneurial choices and signaling, such as prudence and building trust with investors (Lam 2010). Moreover, technology-based firms, arguably the most common startup firms, are particularly vulnerable to financing shortages: The often complete lack of collateral and the reliance on novel and unproven technologies make these firms less attractive to risk-averse providers of financing (Murray 1994).

There is also evidence for a second equity market financing gap in the \$2 – 5 million range, driven by a move to larger and later stage investments by formal VCs (Sohl 1999). In order to fill this gap, angel investors have started to move into larger investments. To ensure proper diversification, risk reduction and an adequate amount of capital, angel investors have begun forming co-investment alliances or networks. However, despite the increased angel activity, the level of funding does not seem to sufficiently satisfy capital needs (Sohl 2002).

The third identified financing gap is related to geography. Research supports the notion that startup financing is divided unevenly across regions and within nations (EVCA 2010; Mason and Harrison 2003). Figure 2.2 depicts the distribution of startup investment from 2010 to 2013 by investors registered on Crunchbase¹⁰. Even though the picture might be biased by the fact that not all investors are registered on Crunchbase, it still gives an idea about the high clustering of investment to the hub areas and particularly to the San Francisco Bay Area that has more than three times as much investment as the second biggest area Boston. The Figure also shows that the U.S. has higher investment than other regions.

¹⁰ A leading startup and investment database

Figure 2.2: Startup Investment by Region – 2010 to 2013



Source: Crunchbase API

Furthermore, The European Venture Capital Association finds that the European financing market for startups is less developed than that of the U.S. Moreover, capital tends to be located to a selected number of regions or clusters in a country (Mason and Harrison 2003). Notable such clusters, as depicted in Figure 2.2, are the San Francisco Bay Area and the North-Eastern U.S. as well as London, Paris and Berlin in Europe. Startups outside these areas are struggling even more to find financing. Governments are increasingly trying to bridge this financing gap, either through publically managed funds or through the extension of capital to private investors on more commercial terms (EVCA 2010). Some of these initiatives are through accelerators or incubators (David A. Lewis, Elsie Harper-Anderson 2012).

2.3.6 Accelerators in Startup Financing

The research on accelerators as providers of startup financing is limited. However, some entries exist; “Copying Y Combinator”¹¹, surveyed the importance of “initial

¹¹ A report outlining a framework for developing an accelerator

funding” and of “connections to future capital”. The report found that on a one to ten scale ‘initial funding’ scored a 4.14 compared to an 8.51 of ‘connections to future capital’, the highest of any category¹² (Christiansen 2009). This suggests that initial funding only needs to be high enough to support growth to the next milestone and that access to funding in the previously concluded financing gaps is more important.

Participating in an accelerator program not only gives the startup access to channels of financing through investors affiliated with the accelerator, but it also gives the startup an important stamp of approval and validation, which is an important signaling factor when looking for capital (Miller and Bound 2011). However, this is conditional on the reputation of the accelerator and startups graduating from more renowned accelerators have an easier time raising financing (Miller and Bound 2011). This is also supported by the 2012 Seed Accelerator ranking that puts reputation with VCs as one of the most important criteria (Hochberg and Kamath 2012).

Furthermore, accelerator graduated startups are likely to receive financing. Table 2.5 shows summary statistics of U.S. accelerator programs surveyed for the seed accelerator rankings in 2012 (Cohen 2014). These statistics indicate that 41% of graduated startups receive funding in excess of \$350,000 within a year after exiting the program.

¹² The surveyed categories were: initial funding, product support, business support, brand connections and connections to future capital.

Table 2.5: Summary Statistics for Accelerator Programs

	Mean	Range
Initial investment provided	\$22,890	\$0 – 50,000
Equity stake taken by the accelerator	6%	5 – 8%
Percentage of graduates receiving subsequent financing of 350k or more within a year of graduation	41%	5% - 78%
Percentage of graduates who successfully exited via sale or IPO (\$1m or more) as of 2011	4%	0 – 13%

Based on Cohen (2014)

2.3.7 Decreasing Cost of Starting a Company

The cost of running a startup has decreased substantially and the decrease can primarily be attributed to two developments: the focus on IT and the reduction of operational costs from more efficient and usage-based procurement models (Miller and Bound 2011). One example is the reduction of web-hosting costs from approximately \$19 per gigabyte and month in the year 2000 to \$0.16 per gigabyte and month in 2011 (Miller and Bound 2011). Cheaper startup costs mean capital providers can fund more ideas from a limited pool of capital. This is an important driver behind the increase of incubation programs in general and accelerators in particular (Miller and Bound 2011).

However, not only has the cost of running a startup decreased, but the ease and speed of development of a startup has also increased, implying shorter acceleration and investment periods leading ultimately to shorter time to market for investors in startups (The Economist 2010).

3. Methodology

3.1 Introduction

This chapter is devoted to explain the research methodology that was used to answer the research questions, presented in Chapter 1.2. Firstly, the choice of research area will be outlined in Chapter 3.2. Thereafter, the methodology will be explained in 3.3. Lastly, in Chapter 3.4, the data selection will be presented.

3.2 Choice of Research Area

The increased importance of accelerators in media (Financial Times 2012; Forbes 2014; The Economist 2014; The Washington Post 2014) has shed light on this business, yet until now very little research has been published. Particularly, how accelerators pick their startups and consequently invested in them has not been covered.

3.3 Choice of Methodology

Conducting research on incubators and accelerators has been difficult as data in this research hardly exist (Sherman and Chappell 1998). Despite the fact that there have been several attempts to create accelerator databases, such as Seed-db.com or Gan.co, the quality of the data, primarily based on self-reporting, is not reliable enough for academia. Given the unavailability of data in the research area, the data had to be generated by either sending out qualitative and/or quantitative surveys or by interviewing the stakeholders directly. In general a quantitative approach was not feasible given the data available and also did not seem to satisfy the exploratory research aims. Survey-based research was disregarded, as it was realized during the pilot interviews that many questions needed clarification given geographic differences in definitions and at some point language difficulties. Qualitative interviewing was chosen as research method as it allowed shedding light upon peculiarities, understanding the reasons for different beliefs and actions as well as anticipating future developments and trends.

Consequently, the prime pillar of this research is qualitative interviews. In addition, it was tried to minimize biases as much as possible and to complement data. Therefore, triangulation (Denzin 1978) was applied by including some quantitative questions, in order to complete our research for illustrative purposes (Jick 1979).

3.3.1 Exploratory Pilot Interviews

In the initial phase of the project, four exploratory pilot interviews with experts were undertaken to gain an in-depth understanding of the problem field. These interviewees comprised of two incubator directors, one co-managing director of a pre-seed fund and one managing partner of a seed-stage investment company. This part of the research was also aimed at improving the questionnaire for later interviews.

3.3.2 Semi-structured Qualitative Interviews

An informal, semi-structured approach was chosen for the pilot interviews, which proved beneficial as it facilitated the identification and understanding of the core issues and challenges. A questionnaire was developed based on a questionnaire originally designed for the classification of incubators (Zedtwitz 2003). This questionnaire shifted the focus of the questions from incubator characteristics to accelerator ones and put increased emphasis on the selection and financing of startups. In order to gain more flexibility during the interview, the questionnaire was not sent to the interviewees. Given the heterogeneity of the sample, the questions were adapted to the interviewees' previous answers. This allowed to get into detail in the case of particular characteristics and to further understand the reasoning for different peculiarities. The questionnaire was slightly adapted after each interview in a continuous improvement and learning process.

3.3.3 Sample Selection

Successful accelerators and incubators were identified as the prime area of interest. In addition, it was tried to reach a strong geographic spread of organizations. After filtering out the accelerators and incubators that are no longer alive as well as the ones that have no contact details, a list of 204 organizations remained. These organizations were identified via four sources.

Firstly, Seed-DB, a global accelerators database with 213 accelerators, was used (Seed-DB 2014). This database emerged from Christiansen (2009), and gives information on the number of companies funded as well as the amount of exits and the amount of funding received as well as the number of employees per accelerator. Secondly, the members of the Global Accelerator Network was added (GAN 2014). This network comprises of 50 of the most reputed accelerators globally. Combined these

accelerators raised almost \$1bn of funding and generated over 5 000 jobs. Thirdly, the top10 incubators globally according to the University Business Incubator index as well as the Forbes U.S. Accelerator and Incubator top10 list was added to complement the list (Mac 2012; UBI 2014). Fourthly, the connections of GLORAD¹³, the Stockholm School of Economics and personal contacts were added to reach out to 20 other successful accelerators.

3.4 Data Collection and Analysis

Out of 214 accelerators and incubators contacted, 30 companies agreed to participate in our research project, leading to a response rate of approximately 15%. From the sample, 22 are accelerators, 6 are incubators and 2 are seed-stage investors. As the research strived to have a global coverage of accelerators, eventually organizations from 18 different countries were interviewed. The organizations were founded between 1998 and 2012 with a median founding year of 2010 (average 2007).

¹³ GLORAD is the Center for Global R&D Management and Reverse Innovation with locations at Tongji University in Shanghai, China, the University of St. Gallen in Switzerland, and Skolkovo Institute of Science and Technology in Moscow, Russia.

Figure 3.1: Locations of Interviewed Organizations



Given the geographic distance to the 30 interviews conducted, 28 were conducted online and 2 were conducted on-site in person. The interviews took on average 50 minutes and ranged from 25 to 2 hours. The interviewed organizations and some summary statistics are depicted in Table 3.1.¹⁴

¹⁴ For a more detailed overview of the organizations see 7.2. (Appendix)

Table 3.1: Interviewed Organizations

Organization	Bethnal Green Ventures	Eleven	Fledge	Gamefounders	i360 Accelerator
Type	Accelerator	Accelerator	Accelerator	Accelerator	Accelerator
Founding Year	2011	2010	2012	2012	2011
Location	London	Sofia	Seattle, WA	Tallinn	Dubai
Country	UK	Bulgaria	USA	Estonia	UAE

Organization	Impact Engine	MAP	Neverstop	NXTP Labs	Plug and Play
Type	Accelerator	Accelerator	Accelerator	Accelerator	Accelerator
Founding Year	2011	2012	2008	2011	1998
Location	Chicago, IL	Melbourne	Memphis, TN	Buenos Aires	San Francisco, CA
Country	USA	Australia	USA	Argentina	USA

Organization	Startup Bootcamp	Tech Ranch Austin	The Junction	Acc1 ^a	Acc2 ^a
Type	Accelerator	Accelerator	Accelerator	Accelerator	Accelerator
Founding Year	2010	2008	2010	2012	2007
Location	Berlin	Austin, TX	Tel Aviv	Telluride, CO	San Francisco, CA
Country	Germany	USA	Israel	USA	USA

Organization	Acc3 ^a	Acc4 ^a	Acc5 ^a	Acc6 ^a	Acc7 ^a
Type	Accelerator	Accelerator	Accelerator	Accelerator	Accelerator
Founding Year	2011	2009	2011	2011	2008
Location	Chattanooga, TN	Dallas, TX	Vienna	Paris	Dublin
Country	USA	USA	Austria	France	Ireland

Organization	Acc8 ^a	Acc9 ^a	VC1 ^a	VC2 ^a
Type	Accelerator	Accelerator	Seed-stage VC	Seed-stage VC
Founding Year	2010	2011	1999	2004
Location	Cincinnati, OH	Louisville, KY	Boston	Lausanne
Country	USA	USA	USA	Switzerland

Organization	Impact Hub Sao Paulo	Startau	Tec Edmonton	UCF Incubator	Yuan Fen Flow
Type	Incubator	Incubator	Incubator	Incubator	Incubator
Founding Year	2005	2009	2006	1999	2011
Location	Sao Paulo	Tel Aviv	Edmonton	Orlando, FL	Beijing
Country	Brazil	Israel	Canada	USA	China

Organization	Inc1 ^a	Inc2 ^a
Type	Incubator	Incubator
Year of Founding	1995	2001
Location	Knoxville, TN	Gothenburg
Country	USA	Sweden

^a chose to remain anonymous

4. Findings and Discussion

In the subsequent chapter it will be focused on the accelerators' selection criteria.

4.1 Selection of Startups

4.1.1 Accelerator Selection Process

Following the definition of accelerators, all 22 interviewed accelerators had an open application with a specified deadline. Applications are made online either via the company's website or specialized applications platforms such as F6S¹⁵. After submitting required documents¹⁶, potential candidates are interviewed online or in person depending on the geographic location. Furthermore some accelerators rely on more comprehensive assessment methods: 11 out of 22 accelerators have on-site evaluation days and some even go further: One accelerator, for example, ran a psychometric test on the entrepreneurs, while another hosted a multiple day boot-camp where the candidates could refine their idea before the eventual presentation. In the end, the selection boiled down to an average selection rate of 6%, which is higher than the 1% outlined in Cohen (2013).

In the selection of startups, the accelerators rely on a variety of different inputs. For example, 10 out of 22 used the expertise of their mentors in their selection process. Moreover, seven accelerators highlighted that they rely on 'gut feeling' when evaluating the startups. The reliance on 'gut feeling' is also supported by VC literature (Hisrich and Jankowicz 1990). The key selection criteria evaluated in the assessment process were team, idea, market and program fit. Team and idea were highlighted by all 22 of the accelerators as key selection criteria and therefore deserve special analysis.

4.1.2 Selection Criteria

The interviewed accelerators stated to select their portfolio companies focusing on the team, the *idea*, the *market* and the *program fit*. This is closely related to the finding of Fried & Hisrich (1994) for VC selection criteria.

¹⁵ www.F6S.com is an angel and accelerator network

¹⁶ Such as one page pitch presentation, venture description, preliminary business plan and team profiles.

Table 4.1: Selection Criteria Used by Accelerators

Idea	Team	Program Fit
Originality and innovativeness	Startup experience	Startup fit
Elaborated business model	Industry expertise	Accelerator fit
Market attractiveness	Specialist knowledge and capabilities	
Societal and environmental impact	Commitment	

Own depiction: Indication of most-indicated criteria -order does not indicate importance

The team was mentioned by all 22 accelerators as an important selection criterion for startups. Firstly, accelerators are focusing on past experience with starting a company. So-called ‘serial entrepreneurs’ are particularly welcome given their lessons learned. Secondly, not only startup experience, but also industry expertise was cited twice as important by the respondents. Thirdly, accelerators are looking for specialist knowledge and capabilities. Given that most accelerators are focused on web applications and other programming-intensive business ideas, technical expertise is highly desired; Plug and Play states that “A strong technical team is a key criterion. The rest the accelerator can help with.” Lastly, seven accelerators stated commitment (so-called ‘traction’) and passion as important selection criteria.

In addition to team characteristics, the idea was cited as an important criterion. Within the category *Idea* the accelerators highlighted the importance of originality and innovativeness, but also the maturity of the business model as well as the impact of the startup. The importance of societal and environmental impact is not very surprising given that 5 interviewed accelerators named themselves ‘Impact accelerators’. In addition to the idea, market attractiveness was also something the accelerators focused on as part of the selection. Out of the 22 accelerators, two accelerators stated market attractiveness as a secondary criterion and five as a tertiary selection criterion.

Another important selection criterion was *Program Fit*: Firstly, the respondents claimed that it is important to examine whether the startup has the right characteristics to fit the Program (Startup fit). In addition, it is also important to survey if the accelerator has the right capabilities to help the startup (Accelerator fit). Program fit

was stated as primary and secondary selection criteria once respectively, and four times as tertiary criterion and its importance is illustrated by a quote of The Junction: “We don’t choose the best, we choose the best-worthy” that indicates that the accelerator seeks people it can really help with.

The results regarding selection criteria partly coincides with Fried & Hisrich (1994). For *Team* the paper highlighted the importance of previous experience as well as the management’s flexibility and business understanding (Fried and Hisrich 1994). Accelerators in our study supported this notion.

“At the interview stage we mostly look at the team and evaluate whether they have the skills to execute, [we look at] their level of ambition, if they are willing to learn, their team chemistry, past project experience and their body language.”

- Paul Miller, Managing Partner, Bethnal Green Ventures

In contrast to Fried & Hisrich (1994), where *Leadership* was important, the accelerators in this study did not have a strong focus on leadership. Instead, the accelerators in this study highlighted *Team Dynamics* as important when selecting teams. While Fried & Hisrich (1994), mentioned *Personal Integrity* as an important selection criterion, this was not supported by our findings as only one accelerator mentioned this criterion. This finding is surprising given the high risk of moral hazard associated with the accelerator business model. Accelerators have to be vary of the moral hazard problems which might arise when extending money to entrepreneurs. All interviewed accelerators extend capital without specified requirements and are thus vulnerable to moral hazard issues. The main risk is that the entrepreneurs might spend the money on non-value creating activities. The accelerators could counteract the moral hazard problem through the selection process by evaluating the trustworthiness of the entrepreneurs. However, only one accelerator considered the teams’ trustworthiness as a key criterion.

According to Fried & Hisrich (1994), VCs focus more on the earnings and the capital requirements of the idea, while the accelerators focus less on the return potential. It is clear that, because of the more mature investments, VCs focus more on actual profit potential than accelerators. Both the VCs and the accelerators paid much attention to

an elaborated business model with a clear competitive advantage.¹⁷ Compared to the idea in the later-staged VC investments, the idea of startups in the accelerator is more subject to change, because of the low maturity of the business model. This is illustrated by the following quote:

“We have had teams come in with one idea and switch to another. At the early stage the team is everything because you can change the idea but you cannot change the team.”

- Alex Farcet, Founder of Startup Bootcamp

Finally, the third category in Fried & Hisrich (1994) was *Returns* which was not looked at by accelerators when selecting startups. Instead accelerators looked at the *Program Fit*. Given that VCs focus more on offering capital whereas accelerators are primarily a business development program, it is logical that in order to maximize value there has to be a *Program Fit* between the accelerator and the startup.

4.1.3 Team vs. Idea

Following the interview responses, the team is more prevalent for accelerators than the idea when choosing startups to invest in. Out of the 22 accelerators interviewed, every one argued that the team is more important than the idea of the startup. This contrasts with literature focused on the selection of investment objects by venture capitalists (Kaplan et al. 2009). Moreover, of the other eight interviewed organizations dealing with early stage startups, seven claimed that the team was more important than the idea when selecting startups.¹⁸

“At the end of the day, who is going to drive the company, develop the idea and return the investment? The answer is the team.”

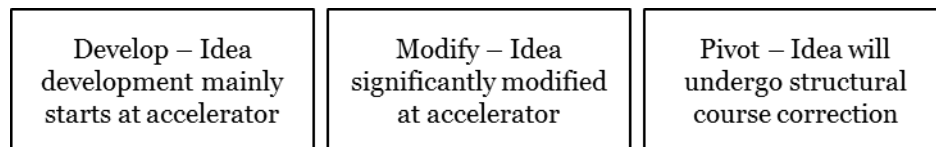
- Alireza Masrour, Managing Partner, Plug and Play

¹⁷ Competitive advantage was termed mostly originality or innovativeness of the idea in the case of accelerators.

¹⁸ Only one university incubator argued that team and idea are equally important.

As indicated by this quote, the interviewed accelerators put strong emphasis on the team when selecting startups. The main reasoning behind this is that the idea at such an early stage is seen as less important and is subject to change. There are three ways of idea change limiting the importance of the idea at the accelerator stage based on Ries (2011) and our interviews. Figure 4.1 highlighted these three ways.

Figure 4.1: Idea Change in the Accelerator



Own Depiction, Based on Ries, 2011

Develop: When entrepreneurs enter a startup they often do not have a well-thought idea at the beginning. The idea and the business model behind it, is instead developed in collaboration with the accelerator over time. *Modify:* Even if the startup already has a prototype of the product or service they want to launch upon entering the accelerator, adjustments to the idea have to be made continuously in order to succeed (Ries 2011). *Pivot:* As new information becomes available when testing different hypotheses, startups might have to completely change the idea (i.e. to pivot).

Knowing how to develop an idea, how to adapt and whether to pivot or not requires a great team. The importance of a receptive and adaptive team has been supported by various respondents as a US-based health care accelerator stated: “[The] team is always more important than the product. A good team will figure out what they are doing wrong and will pivot. Every single one of our companies pivots.”

The team prevalence also applies to accelerators that are not investing in their startups. The Junction, one of Israel’s top5 accelerators, also chooses the teams by people and not by ideas.

“We are not looking for the most amazing ideas, we are looking for the most amazing entrepreneurs. [...] We believe that the team is, what is going to make or break the startup. If the idea is not so amazing, but the team is, they will know and we will help them to

make the change the idea into something that will be amazing or even change the idea.”

- Nitzan Cohen Arazi, Managing Director, The Junction

i360, a UAE-based accelerator, puts so much focus on the team that it even scouts for talent in various cities that are then brought to the accelerator in Dubai. At this accelerator around 75% of the talent is acquired in low resource areas (e.g. Eastern Europe, Africa and Asia) via scouting events. “We focus heavily on the teams. Our value proposition is that we look for talent. We don’t wait for talent to come to us. We scout all the markets for the best talent out there.” This accelerator’s focus on the team goes so far that it is now considering taking in teams without any idea. The accelerator would provide the idea for the entrepreneurs who will then execute it.

Consequently, accelerators and VCs have different selection criteria regarding startups. The selection criteria differs from Kaplan et al., (2009), as accelerators focus more on the team than on the idea. Compared to this paper, which is focused on accelerators, Kaplan et al., (2009) studied VCs’ business plans. In addition to the organizational difference, the stage of maturity under review is different.¹⁹

4.1.4 Shifting Selection Preference – From Team to Idea

The difference in selection criteria preference compared to Kaplan et al., (2009) can be explained by the different startup stages. Since the maturity of the startups in the accelerators is different, it is hypothesized that at some point the selection criteria will shift towards the idea as the business model and product becomes more pronounced and mature.

Four respondents answered that there is in fact a shift over time when it comes to whether to focus on the team or the idea. NXTP, an Argentine accelerator with an early stage-fund, supported this hypothesis by stating that teams become less relevant the more mature the companies are. One reason for the increased focus on the idea over time was stated by the Startup Bootcamp: “When the company grows it is easier to make adjustments to the management and the company in itself becomes more

¹⁹ The median company is 23 months old as of the business plan analysis. 19% of the observations showed positive EBIT.

secure [and] the dependency on the founders decreases.” In general, the respondents argued that the team becomes replaceable and inapt to lead a more mature company over time. Therefore, as the founders either have or have developed the capabilities to set up a company, they do not necessarily have the right skills to run a company once it has reached a certain stage.

“Later on when the startup is ready for series B and C, the team is sometimes good for starting a company, but they are not good at running a company. They may step down and another person joins as a CEO.”

Alireza Masrour, Managing Partner, Plug and Play

Consequently, according to our interviews, the reason for the difference between our research and Kaplan et al. (2009) is the maturity of the startup. At some point, the startup will reach a level where the organization becomes manageable by other teams, who seem to have a competitive advantage at running a more mature business. However, this does not occur at the accelerator stage.

4.2 Accelerator Startup Financing Patterns

This chapter will outline accelerators’ valuation practices for startups and highlight a trend towards more sophisticated investment practices including a categorization of accelerator financing. Lastly, startup financing through affiliated investors during and after the accelerator program will be explained.

4.2.1 Valuing the Startup

The decision to accept a startup into the accelerator program is essentially an investment decision, regardless if actual capital is provided or not. In many cases, the non-monetary benefits associated with an accelerator program could far outweigh the extended initial financing. Even though accelerators go to great lengths to select the proper candidates for their program, few actually conduct a proper financial valuation and due diligence, which would be expected given the high asymmetric information at this investment stage.

The accelerators were asked how they deal with financial assessment of startups and if they used quantitative models to do so. The result was that only three out of 22

had defined processes for assessing the startups' financials. The 19 that did not have such models motivated the decision by the lack of reliable data at this stage of a company's development. The manager of a U.S. top10 accelerator and previous venture capitalist said: "Since none of the companies are profitable when they apply to us, it is all about the quality of the business plan and if we think they can reach financial success." The importance of the quality, rather than the actual predicted numbers in the business plan was highlighted as important by all interviewed accelerators. Consequently, when handling asymmetric information in the selection process, the accelerators focus on the qualitative information rather than on the actual financial data provided by the startups.

To not value the startups is also logical as most accelerators have a fixed initial investment amount in exchange for a fixed amount of equity, basically indicating a pre-set value for all startups that enter the program. Among the 22 accelerators interviewed, the average amount of initial financing extended was \$25 000 in exchange for 7% equity, resulting in an average valuation of \$357 000. These numbers are in line with the numbers found by S. G. Cohen, (2014) in the 2012 rankings of seed accelerators.

The three accelerators that employed more sophisticated valuation methods acknowledged the low reliability of the data. Fledge, an impact tech accelerator based in Seattle, the U.S., used quantitative models as a selection tool. However, according to the managing director, Michael Libes, the actual market estimates in the business plans are reassessed by the accelerator managers because they know from experience that these numbers are often overstated and inaccurate. NDRC, an accelerator based in Dublin, Ireland, also uses quantitative models, however mostly for educational purposes.

"We will take them [the startups] through this valuation process, which is very straightforward and lightweight, but to us it is a very important part of the process. It is part of the education experience as well as they begin to understand what an investor would look at. And for us it really has to do with how far they have progressed and how much sweat equity they have put into the startup at that point in time. The stages of startups we are looking at are anything from

concept up to those who have a prototype model; those are also the sorts of factors that we build into our valuation model. “

- Amy Neale, Director of Communications, NDRC

NDRC stresses the importance of making the startups accustomed to the valuation processes used by investors and also wants to give the teams a status update on how much the work that the founders have put in is worth at the stage of entry into the program.

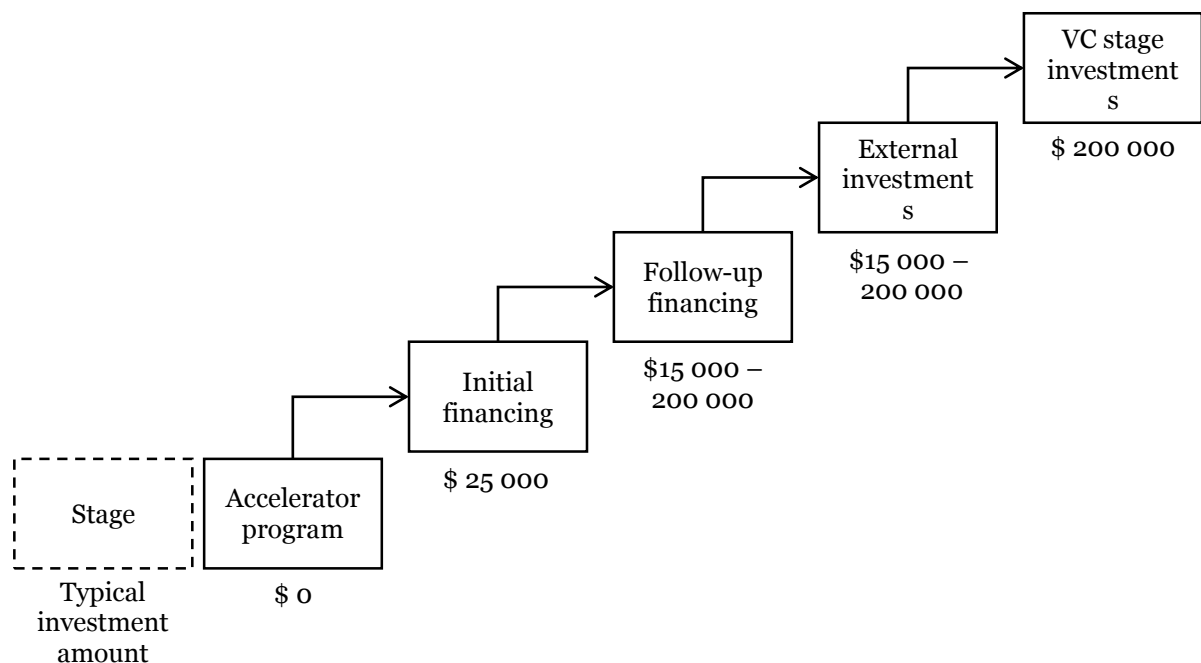
As with the team versus idea discussion in the selection part, the accelerators focus on what can be more accurately assessed at the stage of investment. Given the low reliance of financial data of the startups, a due diligence based on that data does not alleviate the problem of asymmetric information. Therefore, it is natural that the accelerators are evaluating what they can benchmark, most prominently the team.

4.2.2 Accelerators Moving to More Mature Financing

Out of 22 accelerators, 18 are actively expanding their operations to include more VC-like mature financing such as follow-up financing, external investment and series A and B round investing. Two accelerators are not looking to do so, both with the reason that their current mandate restricts them from further investing activities. Moreover, two accelerators were not sure if they would pursue more mature investments.

Accelerators are at different levels of financial sophistication in terms of offering. Broadly, accelerators can be grouped into five levels illustrated in Figure 4.2.1:

Figure 4.2.1: Accelerator Financing Development



Own Depiction

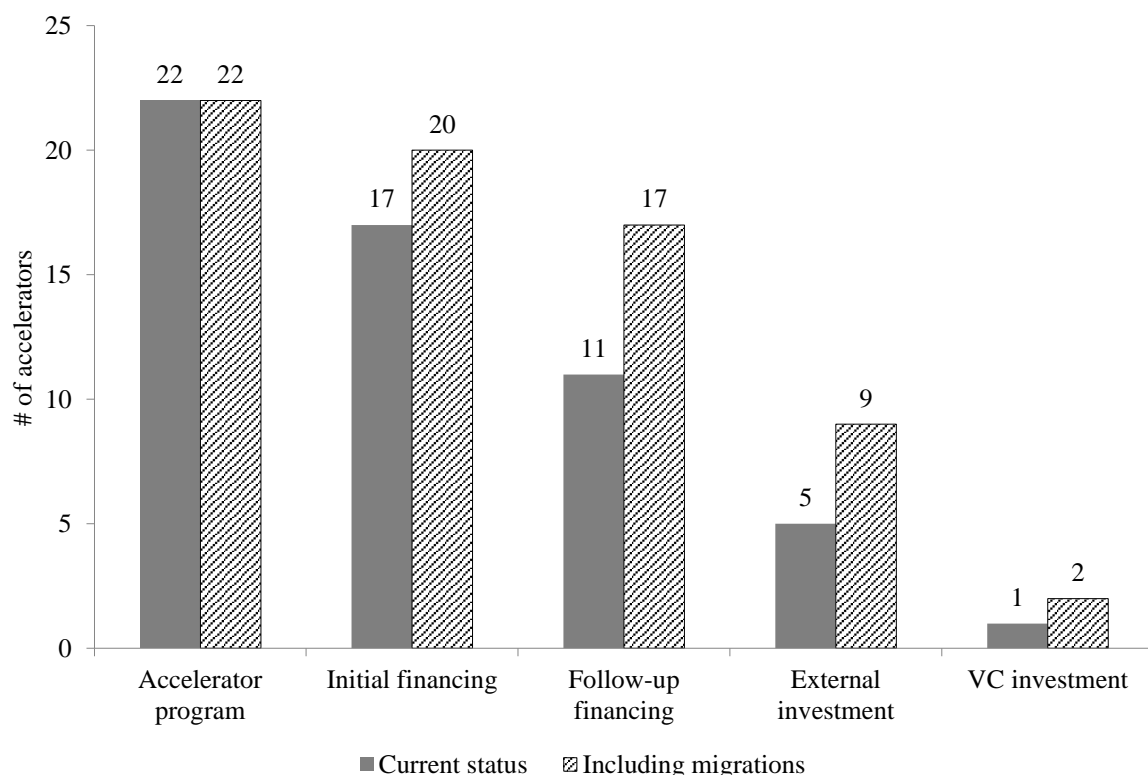
- Level 1.** Accelerator program: Without financing for the startups.
- Level 2.** Initial financing: Offering a small amount of capital in exchange for equity at the inception of the program.
- Level 3.** Follow-up financing: Offering money in exchange for equity or a convertible note at the end of the program or thereafter.
- Level 4.** External investments: Financing startups from other accelerators or stand-alone startups that have not passed the program.
- Level 5.** VC stage investment: Participating in series A, B or later stage financing rounds. Focus shifts from acceleration to investing.

Among the 30 organizations interviewed, 22 could be considered accelerators, according to the definitions put forward in Chapter 2.1.3. Moreover, 17 provided startups that attended their programs with financing and thus fulfilled the requirements for level 2 in Figure 4.2.1. Eleven accelerators provided follow-up financing to their startups, fulfilling the requirements for level 3. Five accelerators had funds that not only financed their own startups, but also startups in other settings, thus reaching level 4. Finally, one accelerator, Plug and Play, based in Silicon Valley

provides not only accelerator level financing, but also the full spectrum of external and VC investment.

Overall, the interviewed accelerators, if able, were eager to expand their financing operations and offer higher amounts and more sophisticated forms of financing to the startups. Figure 4.2.2 displays the number of accelerators currently at each stage of the financing development and the number of accelerators if all desired migrations took place.

Figure 4.2.2: Status of Sample – Current Levels and Planned Migrations



Initial Financing

Because of the low cost of operating a startup today, illustrated in Chapter 2.3.7, it is possible for startups to participate in accelerator programs that offer no financing. However, as depicted in the interview responses, there are still reasons for the accelerators to offer initial financing. All three of the accelerators that looked to move from level 1 to 2 in the development and start to offer initial financing, wanted to do so because it would enable the startup teams to fully focus on the program and the business aspect without having to worry about how to sustain themselves financially.

There were also competitive considerations; good startups had trouble relocating to the accelerators' premises without the necessary financing. Consequently, since the accelerators are competing for the best startups, not offering the initial financing, which is the norm in the accelerator business, hampers the accelerators' ability to source good companies. Two out of three accelerators that had not yet started offering initial financing stated that they will also take equity to boost returns in the case of an exit, if they start offering initial financing.

Follow-up Financing

Out of the 22 accelerators interviewed, eleven actively offer follow-up financing to their program participants. Six accelerators have ongoing initiatives to start offering financing, either through partnerships or using their own fund. Five accelerators are not considering offering financing.

The mean age of the accelerators offering financing is five years, while the mean age of the accelerators that are in the process of offering financing is four years. The mean age for accelerators not offering financing is three years. This indicates a trend that mature accelerators are more likely to offer follow-up financing.

The offered follow-up funding varies from \$5 000 to \$1 000 000 among accelerators corresponding to seed stage investment up to participation in series A or series B venture capital rounds. In six out of eleven cases, the capital is offered through funds associated with, but operationally disconnected from, the accelerator. The reasoning behind this separation is based on the signaling effect of not investing and the asymmetric information discussed in Chapter 2.3.1. If the accelerator makes follow-up investments, but chooses not to invest in a particular startup, this sends a strong signal to potential investors in that startup that the accelerator has some piece of negative proprietary information about the startup which prevents the accelerator from investing. Consequently, because of information asymmetry, accelerators try to make investments from independent funds.

The main reason for offering follow-up financing, suggested by 12 accelerators, is to bridge the financing gap, explained in Chapter 2.3.5 that exists as startups leave the program. Among the seven planning to start offering follow-up financing, four put the financing gap as the number one reason for the initiative. The interviews show that the financing gap is especially prevalent in industries and geographies that have

smaller investment communities. i360, a UAE based accelerator targeting the Middle Eastern markets primarily, found that even though its startups had a 30% chance of being financed at demo day, the rest of the startups struggled to raise capital. Many of these startups even ceased operations as they could not sustain themselves. Therefore, the accelerator decided to launch a fund to invest in these startups. This fund is separated from the accelerator and the managers are independent. According to Kamal Hassan, the founder of i360, the independence is to ensure that other investors are not deterred from financing startups, which the i360 fund does not target. Moreover, in order to ensure quality, it only invests if the fund can find other investors that are willing to co-invest, a common VC practice (Wiltbank 2005). Another way of bridging the financing gap is through arrangements with global venture capital funds that are looking to source deals. In exchange for funding the startups, i360 is offering these VCs the option to have a priority right of investment in the companies coming out of the accelerator.

“Other accelerators in the region [Middle East and North Africa] do not find investments for their graduates. Our objectives with the fund are to partner with other accelerators and tap into them and help the graduates continue their operations. The VC community in this region has always been concentrated on deal flow coming directly to them; we are actively going to the accelerators looking for investment [opportunities], a more pro-active approach.”

- Kamal Hassan, i360 Accelerator

The fund is also independent in the sense that it invests in startups from other accelerators, especially in the Middle East, but also in other parts of the world. As the capital markets are underdeveloped, there are opportunities to source good deals, which increase the return of the fund and improve the entrepreneurial ecosystem in these countries. Accelerators in other regions support the existence of a funding gap and also add other important aspects of follow-up investing to the discussion.

“First, our mission is to get the best return on investment for our investors, so based on that, the best we can do is invest more money in proven cases, which gets money from third party investors. The second thing is more market related. The regional ecosystem is not

mature yet, so the typical seed round is much lower than in the United States. Therefore, we really need to be part of it just to educate the angel investors and small venture capitalists in the region. In that way, the new segment of investors in the region starts to get some trust in the companies that we are offering. It is a signaling effect.”

- *Arturo Torres, Program director, NXTP-Labs*

Arturo Torres, the program director of NXTP-Labs, a for-profit accelerator in Argentina, finds that in order to maximize returns for the accelerator’s investors, follow-up investment in “proven cases” is a key aspect. Moreover, the underdeveloped capital markets means that the follow-up investment act as both an important source of financing in the region, but also as a signaling effect to make other, often less experienced investors, invest in the companies of the accelerator.

The funding gap is not isolated to emerging markets. Bethnal Green Ventures, a U.K.-based impact tech accelerator, found that even though many teams attracted investor attention during the demo day, the process of actually finalizing the financing deal drained time and energy from the startup’s other operations. Therefore, the accelerator itself started offering convertible notes with an approximate value of \$25 000 to keep the startups running until the main investors and the startup finalized the deal.

The follow-up financing is seldom set up as a priced round²⁰, instead eight out of eleven accelerators that offer follow-up financing work with convertible notes. The main advantage with convertible notes over other alternatives, such as common equity, preferred equity or other debt instruments, is that the valuation of the startup can be delayed until a later financing round (commonly the series A round). Other advantages are the speed, simplicity and cost associated with convertible notes. Furthermore, there is added security for the investor given higher seniority of debt in comparison to equity.

The incubators interviewed also acknowledge the importance of follow-up funding. Out of six incubators, three were actively offering financing through

²⁰ Where the company is valued (priced) and stakes in the company are exchanged for money

proprietary funds or angel networks. Moreover, one was actively looking into establishing a fund to support startups post-graduation. The three incubators not offering follow-up financing themselves, instead extend contacts to capital providers, such as angel investors or venture capitalists, the incubator cooperates with.

External Investment

i360, located in Dubai, UAE, is one of five accelerators in the sample that finances external companies. The others are located in Argentina, Israel, Bulgaria and the U.S. Consequently, four out of five accelerators with external investments are targeting regions where the capital markets are relatively weak (South America, Middle East and Eastern Europe). These four all stated that lack of funding in the region was a key driver behind the establishment of an external investment fund. Moreover, these accelerators are also market leaders in their respective geographies and other investors follow their lead. Therefore, indicating the importance of the signaling effect and ‘pack behavior’ of venture capitalists. However, the external investments are not extended only for altruistic reasons; in all five cases, the accelerators started with external investment because of higher financial returns and possibly lower risk with more mature investments.

“We started as a pure accelerator program and we didn’t have the chance to invest in more mature companies because we were not known in the market. After a while, we started to get more active, raise funds from new sources and get some relevance, which allowed us the chance to invest in more mature companies outside of our acceleration program. [...] We did this because the opportunity was there and it is based on our mission which is to get the best possible return on our funds under management. There are also a lot of investments that make sense for us because it adds more value to our network.”

- Arturo Torres, Program Director, NXTP-Labs

NXTP-Labs and i360 both developed their external investment policies over time as their knowledge of investing and position in the regional startup ecosystem strengthened. However, in regions like the U.S., the need to support the regional ecosystem is much lower. Therefore, the external investments of the accelerators and

their affiliated funds are more return-driven. The four accelerators in the sample that are actively looking to start investing in external companies all seek higher absolute returns with increased investment sizes. Furthermore, the accelerators also wanted to invest in more mature companies where the time to exit is not as large as it is from the acceleration stage, therefore decreasing risk.

Venture Capital Investment

Plug and Play, the only accelerator with full venture capital capabilities, uses a hybrid model where it invests on three levels, as an accelerator, as an angel investor and as a venture capitalist. According to Alireza Masrour, the managing partner of Plug and Play, this setup ensures that the fund can successfully source deals from its own accelerator as well as other sources, while still maintaining independence. Moreover, the fund can take larger stakes in high potential companies and achieve higher returns. One factor that lets Plug and Play offer investment at all stages is that the fund has made successful investments in the past, including investments in Paypal and Dropbox, which means that capital is less of a concern for the accelerator. Moreover, the Plug and Play organization has been active since 1999 accumulating much needed investment expertise. A lack of capital and/or investment expertise are two aspects which accelerators brought up as key reasons for not going to the next step in terms of startup financing and investing.

4.2.3 Financing Through Affiliated Investors

All interviewed accelerators (and incubators), regardless whether they provide follow-up financing themselves or not, are actively working to help the startups raise financing through affiliated or outside investors. Furthermore, all the accelerators have investors in their networks and on their mentor lists, which ultimately contribute a large part of the financing to the startups. The accelerators' ability to ensure follow-up financing is not only a common benchmark for accelerator rankings, but it is also of vital importance to the startups as illustrated by Christiansen (2009). Therefore, much effort is put into developing investor networks and improving investment processes by the accelerator managers.

One of the U.S. top10 accelerators interviewed,²¹ uses a system where a convertible note of \$250 000, which can be extended up to \$1 000 000, is opened for all the participating startups. Since most of the investors in the program are also mentors, which have the opportunity to continuously evaluate the startups, there is less of a problem with asymmetric information, less pressure on the demo day and the investors can make more informed decisions on which startups to invest in. In the last weeks of the accelerator program the managers talk to the investors and ask them which convertible notes they want to be part of and for how much. This setup ensures that startups have to actively catch the interest of the investors, but it is also a lot easier because all the paperwork is done and the valuation is not an issue because of the convertible note system. In the words of the manager of the accelerator: “It is basically passing the hat around and asking who wants to invest in which deal.”

Furthermore, the accelerator is not guaranteeing funding, which could put the accelerator in a position where it had to make unfavorable investments in startups, which it would not have invested in otherwise.

“I don’t like the idea of throwing good money after bad by guaranteeing that they [the startups] are going to get funding. I think that is a terrible idea and a lot of accelerators are finding that out now. Many accelerators jumped on-board when Y Combinator did it and have now pulled back that funding.”

- Manager, top10 U.S. Accelerator

The position of this accelerator is that the process of acquiring follow-up financing should be made as easy as possible in respect to paperwork and speed. However, it is important that the decision to finance the startup is ultimately made by the investors during or after the program and that the financing is not guaranteed from the beginning.

...”and then we have the venture capitalists, the vultures, which circle at the end of the program and want to get into the hot deals. I usually tell them which deals are the hot ones ... In many cases, they [the

²¹ According to the 2013 Seed accelerator rankings

venture capitalists] tell me to put \$25 000 into that, \$25 000 into that and \$10 000 into that, only knowing the industry of the companies.”

- *Manager, top10 U.S. Accelerator*

For outside investors, such as venture capitalists who do not have the opportunity to continuously assess the startups; the demo days, reputation of the accelerators and the relationships with the managers are key aspects in order to alleviate asymmetric information in the selection process. Building trust in the investor community is imperative for the accelerator managers because a recommendation from a well-established accelerator has very high signaling value for investors.

5. Conclusions

5.1 Summary

The first research question of this thesis aimed to explore how accelerators are selecting their startups and whether the idea as a selection criterion is more prevalent than the team.

Based on the findings, accelerators focus on three core areas in their selection decision, namely team, idea and program fit. Out of these criteria, it can be concluded that team is perceived as most important by the accelerators. Given that accelerators deal with immature startups, the team is key as it is required in order to develop, modify or pivot on the idea. Even though team was the primary consideration, idea, was also considered an important factor. The third criterion important to accelerators in their selection was program fit.

While the two first criteria coincide with VC literature, the program fit is not evaluated by VCs as they do not run a structured program in the same sense as the accelerator. Instead, the VCs focus more on returns and capital required for the investment. Comparing team and idea, accelerators, as previously concluded, focus more on the team while VCs have a preference for the idea as it is more persistent over time (Kaplan et al. 2009). However, this difference in preferences can primarily be attributed to the difference in maturity and it is hypothesized that once the accelerator founded startups reach a certain maturity, the team's importance will decrease. As the startup matures and the idea is more pronounced, the needs of the startup change and the founding team gradually becomes replaceable. Following that development, a shift towards the idea as the primary focus will occur.

The second part of the research was devoted to understanding how and why accelerators finance their startups.

In general, accelerators do not undertake a valuation when investing in startups, but rather assign a fixed value to all startups by extending a set amount of capital in exchange for a set amount of equity. The prime reason for this behavior is the low accuracy of the data on companies at this stage.

Furthermore, the accelerators can be mapped according to the maturity of their financing processes, where more sophisticated investments often occur in older accelerators. The mapping was done according to a five stage model of accelerator financing that ranges from no funding to VC capabilities (see Figure 4.2.1). Accelerators are generally offering capital to startups for three reasons. Firstly, as such capital usually covers living and travel expenses, the entrepreneurs can devote more time to their ventures and locate to the accelerator's premises. Secondly, accelerators offer financing for competitive reasons and in order to better align the interest between the entrepreneurs and the accelerator. Not offering the initial financing hampers the accelerators' ability to source good companies and has a negative signaling effect. Thirdly, accelerators with initial investments serve as a future 'Deal Pipeline' for VCs. Smaller trial investments during the accelerator program pave the way for larger, more mature investments at a later stage.

Moreover, there is a general shift that accelerators increasingly want to offer more and later stage financing to their startups and that external and venture capital investments are also conducted by some accelerators. The shift to more mature financing is driven by the identified financing gap in the startup financing market as well as the return requirements of the accelerators. More mature accelerator financing is identified as especially important in emerging markets where investments from accelerators have a strong signaling effect for other investors. Moreover, the signaling effect was also considered when accelerators made follow-up investments in their portfolio companies. In order not to send negative signals to investors, financing was primarily done through funds independent from the accelerator. Finally, accelerators also fulfil an important role as deal suppliers to VC and angel investors who through relations with the accelerator can reduce asymmetric information in their startup investments.

This research lays the foundation for future research in the areas of accelerators in general as well as the selection and financing of startups by accelerators in particular. Moreover, this paper highlights the role of accelerators in the investment value chain.

5.2 Suggestions for Future Research

The research in this thesis has largely been exploratory and has tried to establish how and why accelerators act in certain patterns in the selection and financing of their

portfolio companies. Furthermore, some best practices have been highlighted in relation to these areas.

5.2.1 Accelerator Performance Measuring

Within the next decade, accelerators will start to see exits on their investments. At that time it will be easier to answer which accelerators have performed best and which selection and financing patterns work most effectively. It would be interesting to connect the research provided in this paper to actual data and test if certain selection criteria are more efficient in generating company exits for the accelerators. Another suggestion for future research would be to test which financing models works best for accelerators and if financing up to a certain level in the startups' development provides optimal returns for investors and/or society. However, both validations are currently not possible at this stage with the current data availability.

5.2.2 Clarify Accelerator Definition and Categorization of Accelerators

Even though some efforts have been done on this subject, most notably S. G. Cohen (2014) and Miller & Bound (2011). In order to advance research further, a widely accepted definition of accelerators that is also absorbed by practitioners is of vital importance.

5.2.3 The Existence of an Accelerator Bubble

Some of the interviewed accelerator managers hinted to the development of a bubble in the accelerator industry, similar to the incubator bubble in connection with the dot-com crash. Therefore, a study that examines the health and longevity of the accelerator industry would be greatly beneficial. Such a study could also examine which business model and which stakeholders are most suited for running an accelerator and how that affects both the financing and the selection of the startups.

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7. Appendix

7.1 Financial Instruments in Startup Investing

Apart from common equity and straight²² debt, two funding tools can frequently be found in the startup scenery, namely convertible debt and preferred stock.

Convertible debt is a debt instrument that pays a coupon and that can be converted into shares. In the startup setting, this happens often upon the completion of an important milestone. Convertible debt is also more senior in the event of bankruptcy than common equity.

Preferred stock is a form of hybrid between debt and equity that can have a variety of different functions, such as convertibility into common equity, no voting right and callability.

7.2 Overview of Organizations

7.2.1 NXTP Labs

Founded in 2011 in Buenos Aires, NXTP Labs is a for-profit, technology-focused accelerator and early-staged investment fund investing in startups in Latin America. Given that the accelerator is funded by private investors, the accelerator's own goal is to maximize financial return. The accelerator's main goal for its startups is to acquire as many customers as possible by providing coaching, access to network, training, technical support as well as access to capital (\$25 000 for 2% to 10%). NXTP has 11 employees supporting its startups. Accelerator funding was reasoned by the lack of early stage financing in Latin American country and is planned to be developed even further by investing in more companies, increasing the stake per company and investing in other, more mature startups to increase the survivability of the investment objects and to diversify.

²² Unconvertible debt

7.2.2 Tech Ranch Austin

The Tech Ranch Austin, founded in 2008 in Austin, Texas, offers three programs tailored to startups at different maturities that aim at developing the entrepreneurs in order to gain “traction”. The accelerator is a for-profit with both, a profitability, but also an impact goal. Originally focusing on the Texas region, the accelerator is now trying to expand to other countries. The ‘Ranch’ does not provide funding to its startups. As there is no ownership being taken in the startups, the accelerator is reimbursed by charging the startups for rent. In addition, it is also funded by corporate sponsors. The application process is intentionally very open in order to capture ‘Diamonds in the rough’ (i.e. startups in need of help in order to become successful).

7.2.3 Eleven

Eleven is an accelerator and venture capital fund investing in startups in CEE. Based in Sofia, Bulgaria it is among the biggest early-staged investors in CEE. This for-profit organization is financed by a € 12m fund by the European Investment Fund. Invested in 57 companies, Eleven has built up a very diversified portfolio of startups from different industries and with different maturities in CEE and will continue to broaden the portfolio even further. The amount invested generally reaches from € 25 000 (before the program) to €200 000 (after the program). By the end of 2015, Eleven will stop investing in startups and will focus solely on managing its investments in startups.

7.2.4 Impact Hub

Impact Hub Impact hub is a Sao Paulo based incubator that is part of a franchise network of ‘Impact Hubs’ across the world. It was founded in 2005 and focuses specifically on impact ventures that deal with social improvements. Is for profit and runs the incubator along with other operations such as consulting, educational services and offering office space.

7.2.5 Startau

Startau Based at Tel Aviv University in Israel, Startau is an accelerator that offers incubation services as well as entrepreneurial courses and programs for the wider Israeli community. Startau was founded in 2009 and is not-for-profit without investing

in its startups. Furthermore, it is especially targeting entrepreneurship among the Arab population of Israel.

7.2.6 Fledge

Founded in 2012, this for-profit, impact accelerator based in Seattle, Washington aims to help socially and environmentally conscious companies. In addition to coaching and networking, it offers office space at the HUB Seattle and \$15 000 of funding to program participants. Of the 6% equity the accelerator demands for its investment and services, half has to be bought back by the startups using 4% of their top-line revenue (on a quarterly basis) once. Compared to other incubation programs, this accelerator puts a great emphasis on the educational aspect of acceleration as the accelerator curriculum also cover MBA-level entrepreneurship classes taught by an MBA professor.

7.2.7 i360

i360 is a for-profit, global accelerator based in Dubai with a focus on global ideas that are brought to the accelerator in Dubai and launched in the UAE. The accelerator founded in 2011, aims to bridge a funding gap of early stage venture in emerging markets. The accelerator actively looks for talent in Africa, Asia and Eastern Europe by scouting at partnering events. In addition, it is also expanding to Eastern Europa and Saudi Arabia via joint ventures. In 2014, the accelerator set up a seed-stage fund in order to bridge another funding gap aiming to increase the survivability of the portfolio companies after they leave the accelerator. Turn8 is a parallel accelerator model being run by i360, offering different ways of collaborations for corporates and governments ranging from either running the accelerator completely for others to simply offering advice.

7.2.8 UCF

Founded in 1999, the University of Central Florida business incubator, focuses on the Economic development in the surrounding region. This not-for-profit mainly focuses on supporting startups with office space (around 12 000m² in eight locations) and offering coaching and networking. The incubator focuses on job creation with the goal of putting strategic foundation in place for the startup. The incubator's main sources of funding come from the university, regional government and the startups' rent.

7.2.9 Plug and Play

Plug and Play, founded in 1998, is a combination of startup accelerator, angel investment fund and venture capital company. Headquartered in Silicon Valley, it has two more offices in the US and eight more globally. Plug and Play takes in startups from any country and focuses on small number of startups, rather than taking in too many. The organization has made over 200 investments in startups ranging from \$25 000 to 500 000 in exchange for 1-10% equity (5% for \$25 000 in case of the accelerator). The fund is an evergreen fund which has never risen outside money and has mainly grown with company exits such as Dropbox and Paypal.

7.2.10 Gamefounders

Based in Tallinn, Estonia Gamefounders focuses on startups developing video games. The accelerator was founded by 2011 and is financed by angel investors. Entrepreneurs in this industry generally have the technical capabilities to provide the game, but lack support defining the business model. Gamefounders helps the entrepreneurs to develop and refine the business model mostly via coaching and networking. In addition, it also establishes the necessary connections to convert game to businesses and provides €12 500 of funding in exchange for 9% equity. The accelerator wishes to expand globally, particularly to the US in order to be closer to mentors and investors. In addition, more investments are planned along-the-line in order to keep successful games alive.²³

7.2.11 Impact Engine

The Impact Engine was founded in 2011 in Chicago, IL as an impact accelerator with the aim to help startups trying to solve environmental and societal challenges. The accelerator is financed by 20 limited partners. As for-profit accelerator the Impact Engine aims at both the financial return as well as on a public mission equally. In the future, the Impact Engine plans to start a separate fund that will invest in the startups after the program and to focus more on managing the investments.

²³ Yet follow-up investments should be done either as a standard investment or by a separate vehicle as an accelerator doing follow-up investments for some companies gives the not-invested companies a “stamp” of non-approval.

7.2.12 MAP

The Melbourne Accelerator Program was founded in 2012 in Melbourne, Australia as a non-profit university accelerator with the aim of raising the culture of entrepreneurship at the university. It devotes particular attention on matching ideas stemming from different university departments with the accelerator participants. MAP's success is relying on a strong mentor network that can be divided into four parts: Mentorship program has been redefined as an advisory board comprised of i) 'super mentors' (entrepreneurs who have listed or exited entrepreneurs) ii) operational mentors (MAP alumni) for more practical day-to-day advice iii) experienced mentors (industry experts and entrepreneurs with medium success) and iv) main experts (providing legal and other specialist advice). The MAP also offers non-accelerator activities which are open to all individuals such as public forums, workshops and a three day mini-accelerator.

7.2.13 Neverstop

Founded in 2008, Neverstop is a technology-focused accelerator. The accelerator was partly funded by the state, in addition to corporates and individuals, with the mission of fostering economic development in the surrounding region. The accelerator plans to increase its focus on managing its current portfolio.

7.2.14 Tec Edmonton

Founded in 2006 in Edmonton, Canada, this not-for-profit university incubator focuses on the mission of economic development in the surrounding region. Tec Edmonton has three business areas: i) tech transfer ii) business development and iii) an angel investor network. The university's clients are not only university spinoffs, but also companies in the community. Tec Edmonton focuses on the sectors life sciences and tech (around 50% of startups) and on IT (25%) given industrial activity in this region. With 60% of the startups generating revenue, ²⁴ the incubator focuses on a more mature stage compared to the other respondents. Incubation performance is

²⁴ 50% revenue generating but not profitable, 40% non-revenue generating and 10% revenue generating.

tracked with the KPI's (client, revenue and employment) growth, survival rates and capital raised.

7.2.15 Yuanfen~Flow

Founded in Beijing China in 2011 by Microsoft's first 'Anti-piracy Czar' in China, David Ben Kay Yuanfen~Flow is an incubator focusing on tech, art and design. With the mission of nurturing creative processes and creating sustainable businesses, this incubator supports entrepreneurs creating independent businesses, set up in China for China. Diversity is being seen as a success criterion for acceleration: Every team at the incubator consists of a Chinese and a foreign entrepreneur. In addition, gender and age diversity is also appreciated. Although there is no capital offered yet, the incubator is considering offering ring-fenced²⁵ equity capital as it would allow the incubator make the decision how it will be used.

7.2.16 Bethnal Green Ventures

Sponsored by a for-profit fund, this not-for-profit accelerator was founded in 2011 in London, U.K. with the mission of building a community of founders in "Impact Tech". Sponsored by the U.K. government and U.K. trusts, the accelerator is affiliated with the NESTA organization, which is publishing reports on accelerators and incubators. The goals for the startups are to build sustainable and impactful startups and to receive funding. Every month these goals are tracked by asking the startups to submit financial data (such as revenues and costs) and impact data (description of revolutionary effects about societal and environmental impact). At the accelerator the startups go through a maximum of five phases i) team formers ii) proposition seeker iii) customer hunters iv) model refiners and v) scalers. The accelerator also provides seed money to the startups (15 000 GBP for 6%) and started offering follow-up investments.

7.2.17 Startup Bootcamp

Based in Berlin, Germany the Startup Bootcamp is operating in Amsterdam, Berlin, Copenhagen, Israel, Eindhoven, Istanbul and London as a tech accelerator. Founded as a for-profit it remains privately-funded with the aim of giving early stage startups

²⁵ Part of it is of discretionary use to the owner, the residual use of the funding is determined by the incubator.

one year of development in three months. The Startup Bootcamp offers €15 000 in exchange for 8% of the startup's equity and considers doing follow-up investments in its portfolio companies. With 30 employees, the Startup Bootcamp graduated 107 startups, out of which 77 receiving funding.

7.2.18 The Junction

The Junction was founded as a not-for-profit tech accelerator in 2010. The Junction was founded by the VC Genesis Partner with the mission of creating an entrepreneurial community in Israel and to promote the VC's brand in the startup scenery. The accelerator does not invest in its portfolio companies as taking equity potentially would weaken the collaboration among participants. The accelerator runs four cohorts of eight startups per year and graduated already around 90 teams.

7.2.19 Other Organizations

Due to privacy reasons the accelerators, incubators and VCs, who have chosen to remain anonymous will not be described further in this appendix.

7.3 Questionnaire

1. Describe the **focus and mission** of your accelerator!

- Is there a competitive focus in industry, customer based, or geography?
- Is there a public mission or rather a financial objective?
- Why have you / have you not chosen a particular focus?
- Is the accelerator a for-profit or non-profit organization?

2. What are the **goals** you pursue for your startups?

- Business building? Recruiting? Profitability? Independence? Finding capital? Speeding up time-to-market?
- What is success for you as an accelerator? How do you measure success?

3. How do you **select** and filter applying startups?

- What is your selection rate?
- Who performs the selection?
- Based on what criteria?
- What is more important the team or the idea? Why?
- Do you use quantitative models (such as Discounted Cash Flow Analysis) to assess the profitability of a start-up?
- Do you have a defined or best-practice selection process?

4. What **services and benefits** do you offer to startups?

- Office space?
- Coaching?
- Access to networks and human resources?
- Office support such as secretarial services?
- Access to professional services (legal, valuation etc)?
 - If yes, does the accelerator provide legal advice for intellectual property protection
 - If yes, does the accelerator provide intellectual property valuation (i.e. financial assessment for
- Technology transfer/ intellectual property licensing/ intellectual property commercializing)?
- Venture capital?

5. How is the accelerator financed?

- What are the most important stakeholder for the accelerator?
- How are the goals and services determined by the owner?
- How are the services determined by the owner?
- Is the stakeholder interested in ownership in the startups?

6. If **Equity capital** is used: How is the Accelerator investing in the start-ups?

If yes,

- What are the benefits of investing in the startups?
- What is the share of start-up financed by the accelerator?
- What are the assessment criteria for investing in start-ups?

- What tools were used to assess and select start-up and how much start-ups are financed?
- Is the accelerator investment staged with options once the investment is successful? If so, how many stages and what determines the strike price (i.e. the price at which the accelerator can buy shares) and the amount the accelerator is allowed to acquire?
- What determines additional financing of the start-up?
- Are there specified financial goals which the accelerator has to meet? If so what are they?
- At which conditions is the accelerator divesting?
- How are the funds raised for the investments? (Case by case basis; Fund for a set amount of investments/time frame; Greenfield)

If no,

- Why are you not investing in the startups?
- If no reasons mentioned: Is it because of
 - lacking expertise
 - funding
 - owner are risk averse
 - lack of mandate from stakeholders
- What would be the advantages of the accelerator providing funds to your tenants?
- What would be the disadvantages of funding the startups?
- Have you ever offered equity capital before?
- Why did you offer it at the first time?
- Why did you stop offering it?
- Do you know if accelerators in your network have offered or are offering funding?

Accelerator specific question:

- What is the stake of the investment dependent on?
- How homogenous is the investment?
- Is the investment a relative set amount?
- Is the investment an absolute set amount?
- What is the valuation depending on?
- What round are you investing in primarily?

7. How do you get **reimbursed or remunerated** for your services? Cash / fee-based - fixed, variable (basis of assessment), government reimbursement?

- Equity: typical range, what determinants? Can the tenant's fee be reduced by equity or options granted to the accelerator? Preferred or common shares?
- Options: if options are applied for start-up financing how are they usually structured?
 - a) What is the strike price of the option dependent on (sales, equity value, no clear assessment)
 - b) When can the option be exercised
- Mix of equity and options?
- Sponsorship from an investor / no remuneration from startup?
- Is intellectual property (partly) transferred to the accelerator at some point? If yes...
 - a) To what extent?
 - b) Under which conditions/at what time?
 - c) Is it dependent on an option the accelerator is able to exercise?

8. How is **early equity valuation** of startups and **owner dilution** handled in the accelerator?

9. What **services and benefits are most appreciated** by your startups ... and by your investors?

- Is there a difference in appreciation of your services?
- How do you measure this / how do you find out?
- Any potential conflicts of interest? Who would take priority?

10. Who are your **investors**, how did you enlist their support, and to what extent are they involved in the incubation process?

- What is the ratio between business angels, VCs, and institutional investors?
- Why have they selected your accelerator to invest in (competitive scope)?
- Besides capital, what else do they provide?

11. How do you manage **internal allocation of time, money, and resources** to startups?

- How do you devote your time to startups? Evenly, or focused on one startup at a time?
- What are criteria for assigning more office or infrastructure to a startup? Based on need, based on ROI, or based on other criteria?
- How tightly do you control spending of your startups? What is your internal investment policy?

12. How do you funnel your startups through predefined phases and screens in order to optimize and match your services with the needs and maturity of the startup?

- Do you have defined gates and evaluation criteria?
- When was your involvement in these phases most critical?

13. How are you **managing 'investment' risk**?

- Do you mitigate the inbound/external risk by diversification or by concentration? If so, how? (geographically, maturity, industry, size,...)
- Do you have a designated manager or officer for all matters related to risk?
- Is the accelerator actively working with risk management frameworks?
- How is internal risk managed in the accelerator and its investments/supported companies?

14. What is your **graduation policy**?

- Tenure?
- Size?
- Funding?
- Profitability?
- How do you decide when to **pull the plug** on the startup company?
- What is an average time of stay of a startup in your accelerator?

15. What **challenges and problems** of incubation do you see based in your legal, cultural and national context?

- Role of local law for startups... for investors?
- Cultural problems: role of entrepreneurship?

- Why did you start your accelerator here?

16. How are you **different from other accelerators**?

- Did you startups have a choice which accelerator to join?
- Do you actively try to differentiate yourself from other accelerators, or incubation service providers?
- What forces are at play in incubation industry competition?

17. How and to what extent do you **cooperate with other accelerators, VCs, etc**?

- What forms of cooperation do you see with other accelerators?
- What about joint ventures with a law firm, or a consulting company?
- What is your assessment of other incubation joint ventures such as a consulting company with a science park – is this competition?

18. If you had the chance to do it again....

- What would you do **differently**?
- What would you do **again**?
- What could be **done better**?

19. How do you see your accelerator **evolve in the future**?

- What factors will this depend on?

20. General questions:

- Number of full-time equivalent incubation employees
- Number of startups in the accelerator
- Size and duration of investment fund
- Number of graduated startups
- External and internal selection rate