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The DNA of an Entrepreneurial Region

Introduction

For over half a century, Silicon Valley – the 60-mile strip in the Bay Area between San Francisco and San Jose – has been the world's premier high-tech hotspot for innovation and entrepreneurship. It houses more startups than any other region on the globe and has managed to perpetually renew itself. The Valley is a magnet for high-tech startup entrepreneurs who want to excel, and its business climate is based on a unique combination of talent, ideas, creativity, competitiveness, perseverance, and passion. It is an amazing innovative economy filled with ambitious entrepreneurs who are mission-driven and positively obsessed with the aim of disrupting existing markets and mainstream technologies. Silicon Valley is the headquarters of iconic high-tech companies such as Google, Apple, HP, Oracle, Cisco, Facebook, LinkedIn, Uber, Airbnb, WhatsApp, Twitter, Dropbox, Instagram, Salesforce, WMware, and many more: all innovation giants that have changed our lifestyles and our very way of thinking, working, and communicating, and which all began as small but eager startups. These high-tech companies have had an unparalleled social and economic impact and have inspired thousands of hungry startups to shoot for the moon as well. The fact that most startups fail to hit this objective is part of the prevailing Darwinian business logic in the Valley.

A few simple but telling statistics illustrate Silicon Valley's success in cultivating corporate and startup performance. It has been calculated that if the Bay Area, with Silicon Valley as its technological and economic nucleus, were a country, it would rank 19th in terms of GDP.[1] The Valley has the highest concentration of startups (between 14,000 and 19,000) in the world, and this has been the case for decades. It houses more U.S. and Global Fortune 500 companies than anywhere in the U.S. except for New York.[2] The region is home to the headquarters of practically all major social media companies as well as half of the top 100 U.S. private clean technology companies. Silicon Valley high-tech firms are worth over $3 trillion, hold more than one-third of U.S. corporate cash reserves, and earned over $100 billion in aggregated profits (in 2014). Five out of ten U.S. venture capital dollars are spent in Silicon Valley, mirroring the ample availability of VC (venture capital) funding there. It has launched more unicorns than any other place in the US. In

2014 alone, the Valley had 14 initial public offerings (IPOs: first sale of stock of a private company to the public), which was slightly less than 10% of the total number of U.S. IPOs in that year. The Valley's exit volume represents half of the value of startup exits within the top 20 global startup ecosystems and dominates these top rankings in terms of performance, funding, and talent.[3] Its focus on high tech is reflected by the large number of patents originating in the Valley: almost 16,000 in 2013 (13% of the U.S. total in that year). R&D is clearly vital for a region that makes its business out of innovation. Apple and Google, two leading Silicon Valley players, together spend over $12.5 billion on their R&D efforts. With world-class private and public universities such as Stanford and Berkeley in its midst, the Valley offers access to an abundant pool of talented graduates and high-quality fundamental and applied research. Moreover, the region is home to a large number of renowned corporate and non-corporate R&D labs.

All this happens in an area of some 1,800 square miles and a population of about three million people. Unlike in Europe, immigrant entrepreneurship flourishes in Silicon Valley: about half of all startups are founded by first-generation immigrants, particularly from India and China. Some immigrant entrepreneurs have become extremely successful and serve as important role models: they include Sergey Brin (Google), Andrew Grove (Intel), Vinod Khosla (Sun Microsystems), Jan Koum (WhatsApp), and Elon Musk (Tesla). Immigrant human capital is an indispensable part of the Silicon Valley saga. There is no Silicon Valley without its highly educated army of immigrant coders, software engineers, and technologists.

Europe and Silicon Valley

For many European countries, regions, and cities, Silicon Valley is the global paragon of innovation, startups, and high-tech entrepreneurship and a place they want to emulate. Cities such as London, Berlin, Paris, Amsterdam, Eindhoven, Barcelona, Madrid, Dublin, Milan, Tallinn, and Helsinki are quickly developing into profiled European startup innovation hubs.[4] Europe understands that it needs to invest in a dynamic startup economy and to boost entrepreneurship. The Netherlands, for instance, has concluded that it needs more ambitious entrepreneurship and has accelerated its agenda for innovative entrepreneurship and new ventures.[5] The European Union has declared that small and medium-sized enterprises (SMEs) must become more innovative if Europe is to strengthen its vulnerable post-crisis economy and to stimulate economic growth. In 2014, the EU launched its

comprehensive *Horizon 2020* program to boost research and innovation. With nearly € 80 billion in funding made available, the program aims to enhance Europe's global competitiveness, drive sustainable economic growth, and create jobs.

Silicon Valley's innovation and startup architecture is a global benchmark. Every year this high-tech region is toured by busloads of European (and non-European) policymakers; politicians; entrepreneurs; venture capitalists and other investors; university representatives; and national, regional, and city authorities who want to learn from Silicon Valley – to taste its secret sauce, so to speak. They all want to see what makes the Valley tick, to understand the anatomy of this exceptional innovation area, and ultimately, of course, to explore what Europe needs to change in order to energize its level of competitive innovativeness and entrepreneurship. This is not an easy challenge. Major institutional and cultural obstacles need to be overcome, entrepreneurial attitudes must become stronger, governments must redefine their role, educational systems need to become more entrepreneurial, more venture capital must become available, and a more elaborate startup support infrastructure must be established.

In considering Silicon Valley as the startup and innovation mecca, Europe should understand that there are at least three constraints to adopting this model: the impact of path dependence, the role of culture, and the risk of an increase in social inequality. Let me briefly explain these issues.

Silicon Valley is not the intended outcome of an innovation and pro-entrepreneurship policy that was designed a priori. It was not created overnight, nor did it start as a technological *tabula rasa*. Rather, it is rooted in an innovation history that advanced through a series of technological paradigm shifts. The history of Silicon Valley, going back to the early 20th century, clearly embodies this primacy of path dependence (Scaruffi 2014; Sturgeon 2000). Its current high-tech dominance is embedded in a long chain of technological disruptions and innovation waves that spanned decades. It started with vacuum tube radio technology that later became a fruitful breeding ground for technologies such as microwave tubes, semiconductors, and integrated circuits (Lécuyer 2007).

Both World Wars, the Korean War, the Cold War, and the Space Race led to massive government spending on new defense technology from which Silicon Valley greatly benefited (Leslie 2000; Mazzucato 2014), spearheading the Valley's role as a center of innovation and technology. These developments in technology and their new applications paved the way for the more recent computer and software revolution, which quickly reached mass consumer markets – facilitated, of course, by the rapid expansion

of the Internet. It spurred a seemingly never-ending stream of programs and applications – and, more recently, apps for smart phones and other mobile devices – that have penetrated the lives of billions of people. No domain, country, continent, or generation has remained untouched by this revolutionary acceleration of technological hardware and software applications, and Silicon Valley was and is a key disruptive game changer.

This path-dependence framework (Lebret 2007; Nelson & Winter 1982; Stangler 2013) implies that high-tech innovation regions such as Silicon Valley cannot be copied for the simple reason that its history cannot be replicated. It also entails that creating European innovation hubs will only work when based on a proved innovation infrastructure and network of high-tech companies, or, as I argue in the next chapter, an advanced ecosystem. Excellence in innovation is not something that can be attained from thin air; it takes a technological environment and innovation setting that have some degree of sophistication and maturity. Regions and cities that dream of having their own Silicon Valley but lack a supportive ecosystem will not see their dreams become reality.

The second constraint is the role of culture. The Silicon Valley innovation and startup model is rooted in a culture that cherishes an entrepreneurial mindset and big ideas but also openness, sharing, drive, achievement, and commitment. The model is based on a culture that prizes risk-taking and accepts failing; one that calls for pro-active networking and fearless self-presentation; one that favors thinking big, encourages disruption, promotes diversity, and takes persistence and hard work for granted. It is the combination of these cultural characteristics that is at the core of the Silicon Valley model. The European willingness to learn from Silicon Valley will only pay off if we take these cultural prerequisites seriously. Changing the prevalent culture in European countries with respect to an innovation mindset, entrepreneurship, and work attitudes takes time, in some cases even generations. Cultural change cannot be decreed from above but rather is a long-term process in which education plays a key role.

Fortunately, European leaders realize that Europe needs to address its entrepreneurial deficit and revolutionize its culture of entrepreneurship. In the revealing words of the European Commission: "there is (…) a widespread culture that does not recognize or reward entrepreneurial endeavors enough and does not celebrate successful entrepreneurs, as role models who create jobs and income. To make entrepreneurship the growth engine of our economy Europe needs a thorough, far-reaching cultural change."[6] The European Startup Manifesto (2013) underlines this need for Europe to effect a change in culture: "To create more businesses

and more startups requires more than a change in policy. It requires a change in mentality."

The third issue – the risk of an increase in social inequality – is of a different nature and relates to the underlying social model of Silicon Valley, a model that embraces the ideal of meritocracy and a winner-takes-all mentality. Though the Valley is a prosperous region with the highest per-capita incomes in the U.S., it is also home to blatant social inequality: its wealth is very unevenly divided over the various population groups. African-Americans and Hispanics in particular are overrepresented among the less privileged segments. Income gaps are widening. The high-tech economy may be booming but so are housing prices and the cost of living, squeezing the lower and middle class out of the Valley and out of San Francisco. Wealth polarization is painful. This is also part of the Silicon Valley story, and Europe needs to agree on what deviations from the European social model it is willing to accept and where it should draw the line between meritocracy and social equality, between the individual pursuit of happiness and the collective goal of solidarity, between exclusion and cohesion. From an anthropological point of view, the Silicon Valley model is based on an almost 'hubristic' paradigm and an overconfident conception of man, whereas incrementalism and a step-by-step approach is more characteristic of the European psyche.

These three basic constraints lead to the conclusion that the Silicon Valley innovation and startup model cannot simply be copied by European policymakers and stakeholders. Replication will not work because preconditions cannot be met (path dependence, culture) or necessitate a social debate (inequality). But this conclusion, it must be stressed, is the *beginning* of the policy discussion and not the end. Europe needs to commit itself to building a competitive startup economy, but in doing so it must find and develop its own model – a model that fits its core values, its cultural challenges, and the history of its technology.

Accelerators: Pillars of Silicon Valley's startup support infrastructure

Having said all this, there is much that European policymakers, innovation stakeholders, and startup founders can learn from Silicon Valley. One of the cornerstones of the Valley's advanced ecosystem is the role played by for-profit and non-profit accelerators that help startups in commercializing their business ideas. There is a vast infrastructure of accelerators in Silicon

Valley that assists startup founders in developing their product (or service), in strengthening their team, in working towards a MVP (minimum viable product), in designing a business and marketing plan, in attracting funding and investors, in coaching and mentoring the startup team, in bringing the product to the market, and in getting first customers and achieving traction. This refined accelerator support structure is a key feature of the Silicon Valley innovation and startup model (Bay Area Council Economic Institute 2016).[7] The approaches and business models of accelerators differ considerably (CBIA 2016). Some accelerators are large, some are small; some have specific target groups, others welcome a diverse array of entrepreneurs; some focus on specific technologies, others are more general; some accelerators take equity, others do not. Some offer office space, others work online. But they all share the same ambition to help startups to succeed.

These 'schools of startup entrepreneurship' flourish and are an intrinsic part of the way Silicon Valley innovates and launches new startups.[8] Because they service new ventures with an integral offer of resources, coaching, and networks, they empower startup teams to make their business viable. Serious startups are thus keen to be admitted to an acclaimed accelerator. It enhances their market chances and funding opportunities. "A stepping-stone towards further financing", according to Højer Nicolaj Nielsen (2017: 100), well-known Danish serial entrepreneur and business angel. But competition is tough, as demand does not match supply by any measure. It is extremely difficult to get into the top accelerators. Accelerators' rates of rejection are considerable; the entry bar is set high.

The economic impact of accelerators is substantial. CBIA (2016) has calculated that portfolio companies from accelerators (and incubators) in California have raised $16.9 billion in cumulative funding since 2004. The average accelerator injects over $400,000 annually in its local economy. Two-thirds of accelerators invest directly in the startups they admit into their programs. Accelerators, CBIA concludes, "have become a key ingredient to supporting new generations of startups, whether they are corporate, non-profit, academic, or private." (2016: 7). Their graduates "have harnessed those resources for expansion in the U.S. and the world, and have invested in new jobs, facilities, and equipment, while spending extends to every corner of the world."[9] Brad Feld, co-founder of Techstars, one of the earliest U.S. accelerators, even speaks of an 'accelerator movement' that has fundamentally changed the way companies are created.[10]

I believe that in its ambition to upgrade its startup infrastructure, Europe can greatly benefit from having a closer look at how Silicon Valley has developed its accelerator support system. This is precisely the goal of this

study: to share the main findings, conclusions, and recommendations of the research I conducted among a significant sample of Silicon Valley accelerators with European policymakers, scholars, students, entrepreneurs, and startup founders. I believe that the way these accelerators operate can serve as examples for Europe in its development of a more professional startup support system.

In this descriptive study, I examine the way Silicon Valley accelerators operate in priming startups for the marketplace. Based on a series of interviews with accelerators in the Valley, I outline the different underlying business philosophies of accelerators and the target startups they focus on. I also describe the accelerators' unique selling points (USPs) as well as the rigorous way they select the startups that will enter their program. Furthermore, I report on the content and intensity of the accelerator programs with respect to product development, team building, coaching, mentoring, networking, funding, and support facilities. What is crucial, of course, is the access of accelerators to angel investors, VCs, and investor funds. I analyze the business models that accelerators are based on and their startup funding options (e.g., equity). Likewise, I describe the networks that accelerators are involved in, the way they cooperate with external partners, the challenges they see, and future plans they may have (including expanding their business to Europe). Finally, I examine the perceived success of accelerators. How effective accelerators are in growing and scaling startups is a topic that has been much debated in the literature and in the public discourse. Is there a strong correlation – or even a causal relationship – between accelerator participation and startup success? Settling this issue is beyond the scope of this study, but in my interviews I invited the chief executives of accelerators to reflect on these matters.

Accelerators mentor and facilitate startups in the process of making their new product or service market-ready. Let's take a look at how some accelerators market themselves, often peppered with a dose of positive Californian bravado. RocketSpace prides itself on its alumni such as Dropbox, Spotify, and Uber, stating that: "We help bring the future to the market. Our campus is a tech startup's paradise. We've designed the perfect ecosystem that fosters networking, community, and innovation specifically to help startups to thrive." 500 Startups, which has funded successful startups such as Twilio, Credit Karma, MakeBot, Wildfire, and Viki, brands itself as "a startup MBA on steroids". Tandem's mission is to back "the next generation of disruptive entrepreneurs", and HAX defines itself as "the world's first and largest hardware accelerator". Runway's passion is to be "the workplace for innovators", and The Hive's vision is to "change the world with artificial intelligence".

Corporate accelerator Samsung NEXT's drive is to partner with (startup) entrepreneurs "wherever they are and empower them with what they need to go farther, faster." Plug and Play, an investor in numerous startups including PayPal, SoundHound, and LendingClub, claims to be "the world's biggest startup accelerator (...) which produces unbelievable success stories every day". Modesty and unpretentiousness are not concepts that dominate the Silicon Valley dictionary of entrepreneurship, to put it mildly. Instead, "Think Big, Aim High" is the leading mantra, mirroring the ambition, passion, and spirit of entrepreneurship that are embedded in the Valley.

Accelerators: their role, research, and results

Empirical studies on the role of accelerators in launching startups are very scarce (Dempwolf et al. 2014). This lack of systematic research can be attributed to the simple fact that accelerators are a relatively new phenomenon. Pioneering accelerators such as Y Combinator (Mountain View, California), Techstars (Boulder, Colorado), and Seedcamp (London) were created only ten years ago, and the rapid growth of accelerators in Silicon Valley and elsewhere has only taken place in the last five years. The implication of this short history is that there is only limited comparable data available on the effectiveness of accelerators (GALI 2016; Cohen & Hochberg 2014; Miller & Bound 2011). For-profit accelerators, moreover, are not obliged to publicize details about their startup growth programs.

There is some conceptual confusion, too. This begins with the definition of what an accelerator is. One of the issues here is the validity of the distinction between an incubator and an accelerator. There is an ongoing debate in the academic and popular literature on the relevance of this distinction, and definitions differ considerably (CBIA 2016; Deering 2014; Nielsen 2017; Van Weele 2016). The first-generation incubators – which emerged in Europe in the 1980s and in Silicon Valley in the late 1950s – primarily offered co-working office space and were based on a real estate business model. They supplied new ventures with economy-of-scale advantages. Examples are science parks and shared office buildings. The second-generation incubators, which emerged in the early 1990s, added an in-house support service structure including training and coaching as well as some funding. The third-generation incubators came onto the scene in the late 1990s, offering a more extended portfolio that provided access to networks and external resources such as venture capital (Van Weele 2016; Grimaldi & Grandi 2005, 2012; Bruneel et al. 2012; Mian et al. 2016; Pauwels et al. 2016).

Accelerators, which were launched in the last five to ten years, might be seen as fourth-generation incubators or, alternatively, as startup growth facilities of their own, as they differ from typical mainstream incubators. An accelerator can be defined as a miniature or micro-ecosystem that helps startups to rapidly grow their business, offering a broad scope of support and facilities such as coaching, mentoring, and training; fine-tuning product-market fit; providing access to investors, networks, and clients; and creating a learning community of practice and peers.

Inspired by recent contributions by CBIA (2016), Nielsen (2017), Cohen & Hochberg (2014), Miller & Bound (2011), and Dempwolf et al. (2014), I identify a number of features that differentiate accelerators from incubators. These include the admissions process, duration, funding, program intensity, teams, culture, and cohorts.[11] Accelerators apply highly competitive and restrictive selection procedures: only the most promising startups are admitted. The screening process is scrupulous, and only a small percentage of startups make the cut. By contrast, incubators have open admissions policies and are solely restricted by limited office space. The duration of accelerator programs is deliberately short and in most cases lasts up to three months. Accelerated startup business cycles may speed up growth or may hasten failure. Graduation from an incubator, however, may take up to five years and occurs within a generally protective environment, often framed as a 'safe haven' for nurturing new businesses (Bergek & Norrman 2014). Funding also differs. Privately owned accelerators provide admitted startups with some funding in return for equity or convertible notes, as they primarily aim to develop a profitable portfolio of seed-stage investments. By contrast, many incubators are publicly owned and not based on a business model that centers on financial participation in new ventures. Accelerators seek startup growth and scale that allows for a profitable exit (i.e., going public through an IPO or getting acquired by another firm), while the rent-seeking business model of incubators is by definition based on delayed exits and prolonged stays. Coaching, training, mentoring, and networking are provided by accelerators on a much more extensive and intensive basis than incubators do, something economist Ian Hathaway (2016a) describes as 'immersive education'. Offering 'smart capital' by seasoned entrepreneurs is a defining characteristic of professional accelerators. The focus on startup teams rather than on individual entrepreneurs is a further trait of accelerators, while incubators do not have distinct entry policies in this respect. Accelerators, furthermore, are usually very outspoken in their preference for startup founder teams, as they believe complementary skill sets are needed that as a rule cannot be embodied in one person. According to the logic of

accelerators, growing a startup is a team effort and is simply too much for one individual. Accelerators endeavor to create a vibrant, high-pressure environment and an entrepreneurial pro-innovation culture that reinforces competition, performance, and rapid growth. This is much less the case for incubators. A final basic difference between accelerators and incubators is that startup teams in larger accelerators enter and graduate in groups, also known as batches or cohorts. This fosters bonds between startups, enables peer group support, and cultivates a shared identity between founders in the same cohort. The admissions procedure in incubators, as mentioned, is on a continuous basis, dependent on available office space.

It should be noted that these seven features I use to distinguish accelerators from incubators result in Weberian ideal-type representations of the two startup growth facilitators. In reality, as we will see, the distinction between incubators and accelerators is less clear-cut and more diffuse, as these defining features are not necessarily fully represented in concrete examples. There is clearly a gray area (CBIA 2016). Consequently, the taxonomy is instrumental rather than conceptual; it mainly points to operational differences.[12] Deering (2014: 13) uses a simple but clarifying analogy to explain these differences: "Incubators can be thought of as startup gyms – equipped with the necessary resources, environment, and guidance to grow your startup – while accelerators can be thought of as startup boot camps – just as equipped as incubators, but involving a more defined mission, application process, methodology for progress, and stakeholders. All in all, accelerators tend to focus more deliberately on achieving certain success criteria for a startup."

Van Weele (2016) recently published an important study on the role of accelerators (though he uses the term incubators) in varying national contexts. I particularly like the three theoretical frameworks he offers to explore the mechanisms and practices of the startup incubation and growth process. The first framework is the Resource Based View (RBV), which identifies the main tangible and intangible resources that accelerators provide to startups in order to increase their competitive advantage: office space, funding, knowledge, and networks. Startups struggle to accumulate resources that are necessary for product market launch, and accelerators help them to overcome this basic deficit. The second framework consists of theories on Organizational Learning (OL), which define entrepreneurship as a learning process in which startup teams learn by doing. In this perspective, accelerators aim to boost the teams' learning curve. The third theoretical framework states that starting entrepreneurs learn through active participation in Communities of Practice (CoP). Accelerators provide

such a community-learning environment by sharing expertise, practices, and challenges and by creating an internal culture that shapes startup identity and generates entrepreneurship, passion, energy, and competition.

These three theoretical frames of reference are important because they focus on specific support processes and attributes that add to accelerators' potency in bringing startups to the marketplace. These accelerating mechanisms, according to Van Weele, may directly or indirectly support startup performance. Networking is a powerful aspect of the accelerating process. The accelerators' networks "contribute to startup performance by enabling startups to access missing resources, to efficiently acquire market, business, and technological knowledge, to gain legitimacy and to overcome challenges in the entrepreneurial ecosystem" (Van Weele 2016: 250). Accelerators, furthermore, may facilitate 'higher learning': a process in which startup teams come to question the assumptions underlying their new business, which may lead them to experiment with their product or even to radically change their business model.

Pauwels et al. (2016) investigated accelerators across Europe and came up with three basic types: the ecosystem builder, the deal-flow maker, and the welfare stimulator. The ecosystem builder is an accelerator that is often created by corporates as a matchmaking device linking startups with customers and stakeholders, which in turn creates an entrepreneurial ecosystem around the corporate company. The deal-flow maker typifies an accelerator that is funded by VCs, angels, and investment funds with the primary goal of selecting promising startups for investment purposes. The welfare stimulator is commonly an accelerator backed by government stakeholders in order to promote startup communities and economic growth centered on certain technological themes and domains.

Though research on accelerator effectiveness is scarce, there is a handful of research studies that we can consult. One study by Hallen et al. (2014) showed that accelerator-backed new ventures were faster at raising venture capital and at gaining customer traction than similar non-accelerator ventures. Winston-Smith & Hannigan (2015) found that accelerator graduate startups were more likely to raise next-round financing sooner than non-graduates and had a higher chance of exiting by acquisition or by quitting.[13] A 2016 study by the Global Accelerator Learning Initiative also indicated that accelerator startup graduates managed to raise larger new investments. Fehder & Hochberg (2015) concluded that accelerators have a positive impact on regional ecosystems, particularly by having more seed and early-stage entrepreneurial financing activity. But, again, it has to be emphasized that these studies are early accounts of accelerators' effectiveness. Performance

metrics based on comparable longitudinal data are rare. We need much more empirical data and case studies on how accelerators are doing in terms of effectively growing and scaling startups, and not only in Silicon Valley. Having such metrics would greatly enhance our understanding of how accelerators operate and what determines its achievements.

Methodology

This study is part of a broader research program aimed at understanding and explaining why Silicon Valley has succeeded in becoming the global center for innovative startups and cutting-edge entrepreneurship. This larger research program is based on a variety of data collection methods, using different primary and secondary sources. Based on these insights, I come up with recommendations for improving Europe's policy towards startups. The ecosystem concept is a key notion in the way I frame the Silicon Valley success story. A reconstruction of the Silicon Valley ecosystem shows how this region's economic and technological track record is rooted in a set of advanced institutional and cultural factors that fuel innovation and new ventures. It is an ecosystem that manages to renew itself continuously and that spurs talented startups. My book *Silicon Valley: Planet Startup* (2016), co-authored by Arne Maas, attempts to portray this remarkably well-advanced ecosystem and to demonstrate how it lays the foundation for a thriving startup community.

Over the past years, I took various research trips to the Valley to interview numerous startup founders and CEOs in the area; consulted local domain experts, entrepreneurs, and business representatives; had conversations with colleagues from the Bay Area universities; spoke with economic think tanks and chambers of commerce; talked with policymakers and politicians; organized group interviews with students; studied the history of Silicon Valley; and reviewed the scholarly and popular literature on the Valley's success and impact.[14] I furthermore interviewed VCs and angels, attended angel funding pitch rounds, went to startup events and network meet-ups, drank numerous *lattes* in startup cafes in SoMa– the neighborhood in San Francisco that is home to many startups– and, of course, visited the Valley's iconic high-tech corporates.

As explained above, accelerators are pillars of Silicon Valley's highly developed ecosystem. Some of them have launched mega-successful startups. On an aggregate level, they receive thousands of applications a year. Because accelerators need to be both profiled and visible to startups and funders,

most of them are fairly well known. This makes it relatively easy for a study such as this one to identify accelerators, even if their numbers are rapidly growing (CBIA 2016). The first methodological step was to reduce the long list of accelerators to a meaningful short list of about twenty to twenty-five companies where an in-person interview could be arranged. A transparent set of criteria was used to facilitate the selection procedure. The sample I ended up with is a fair representation of the following six accelerator features: profit vs. not-for-profit, general vs. specific focus, taking equity vs. not-taking equity, large vs. small accelerators, offering workspace vs. virtual program, short vs. longer programs. I allowed myself some flexibility in applying these criteria, also in view of the overlapping gray area between accelerators and incubators. And finally, the accelerators in my study needed to be in business for at least two to three years.[15]

With this set and with the help of some well-known key persons in my Silicon Valley network (see Acknowledgements), accelerators were selected and approached by email for a personal interview. Most of the accelerators accepted the interview invitation, some of them did not respond, and one declined because of lack of time. All the accelerators that were directly linked to me via email by my key contact people agreed to be interviewed, illustrating the strength of networks in the Valley. This non-probability sampling procedure worked well: a total of twenty-three accelerators could be interviewed (see Appendix 1). Two accelerators were interviewed in the autumn of 2015, twenty accelerators in the summer of 2016, and one in the autumn of 2016. The two accelerator interviews held in 2015 were part of my fieldwork for the previous book project but fit well into this research study and were therefore included. Twenty-one interviews were conducted face-to-face, and two interviews were conducted via Skype. Eight of the twenty-three selected accelerators are based in San Francisco, fourteen in Silicon Valley, and one in nearby Oakland. All the interviewees are accelerator founders and/or chief executives. Three of the accelerators in my sample rank in the top nine best performing accelerators in the United States: 500 Startups, the Alchemist Accelerator, and StartX.[16] Four of the accelerators are in the top ten global accelerators for overseas startups: Founders Space, Plug and Play, 500 Startups, and HAX.[17]

The questionnaire I used is thematically structured and clustered around a number of subjects relating to the way accelerators operate and to the conceptual model outlined in the next chapter. The main topics covered are: accelerator philosophy, perceived unique selling points, startup intake and selection procedure, technology focus and startup target group, funding and business model, accelerator program characteristics, perceived accelerator

challenges, cooperation partners, success attribution, and future plans (see Appendix 2). Although the questionnaire is quite lengthy, all the interviews were without exception animated, open, informative, and very pleasant. Interviewees were genuinely interested in the topics of the interview, and the conversations were energetic and lively. The length of the interview varied between 60 and 90 minutes.[18] With the exception of the two Skype interviews, I conducted all the interviews at the accelerator itself, in most cases preceded or followed by an on-site guided workspace tour.[19] This provided *couleur locale* and a good impression of the accelerator in action. It also offered an opportunity for me to talk to startup teams that were taking part in the accelerator program.

With the interviewees' permission, the interviews were recorded digitally.[20] Transcripts were made by Flatworld Solutions, a specialized transcription service in Bangalore, India.[21] Three random quality checks per interview were done by the research team, and no irregularities were observed. All the interviews were analyzed by Atlas.ti, a professional software program for qualitative data. Interviewees gave their consent for me to publish quotes from the interviews.[22] Two of my respondents changed jobs in the period between the interview and the finalization of the manuscript. Doug Davenport, founder and CEO of Prospect SV, is now on its Board of Directors. Matt Walters, the managing director of Runway, is now general partner at Mission VC. TiE LaunchPad's three-year lifecycle was concluded at the end of 2016 and has since continued as TiE Angels. Additional secondary data collection on accelerators' performance and portfolio was closed on March 31, 2017; developments after this date could not been included.

I decided to write this study in a way that allows the accelerator founders and CEOs to tell their own story of how they help startups to accelerate growth and scalability, their accelerator philosophy, their accelerator programs, their showcases, the challenges they encounter, and their ambitions for the future. I feel that this writing method adds to the readability of the study and helps me to communicate my main findings to my European target group in a more convincing way.

Overview

This book is structured as follows. In chapter 2, an attempt is made to explain why Silicon Valley is such a globally successful region in terms of innovation and entrepreneurship. The conceptual model that will be

introduced stresses the particular way in which cultural and institutional factors interact in this region. The model emphasizes that pro-innovation cultural factors such as thinking big, the tolerance of failure, the preference for openness and sharing, the eagerness to compete and to excel, and an entrepreneurial mindset constitute an extraordinary fertile breeding ground for a thriving startup community. Institutional factors such as access to talent, access to funding, a pro-active government, and an effective new venture support system are equally relevant in understanding Silicon Valley's high-tech startup success story. Accelerators, I will argue, are in essence intentional micro representations of this unique combination of cultural and structural factors. They are a focal element of the Valley's startup support infrastructure.

The chapters that follow examine the views of the accelerators' chief executives on their role in this infrastructure and their opinions on the various topics covered by this study: accelerators' selection procedure, business model and funding; the features of accelerators' programs; startup coaching and team mentorship; success and fail factors; and accelerators' challenges and future plans. Chapter 3 describes some of the chief differences between the accelerators with respect to their philosophy of supporting and growing startups, whether they specialize in certain technology sectors or have a more general scope, and how they collaborate with external partners. The chapter also explores the various accelerator business models. What is the underlying revenue matrix of profit and not-for-profit accelerators, and what are the different funding options (e.g., equity requirements) they offer to startups? Chapter 4 reports on how accelerators organize the selection and intake process for startups to enter their programs. How restrictive are accelerators, what are the main selection criteria, and what is their rejection rate? What qualities do they prioritize among startup teams?

The accelerator startup programs themselves are analyzed in some detail in chapter 5. I look at the nature, frequency, intensity, and duration of the various programs. The chapter shows that accelerators differ markedly in this respect, as they look for distinct market niches, competitive advantages, and market or mission-driven technology segments. Chapter 6 outlines the chief executives' beliefs about why some accelerator startups succeed while others fail. Is there a basic pattern, or do causes differ substantially? What are the accelerated startups they are most proud of and why? And what do executives perceive as the most pressing challenges their accelerator faces, and what are their plans for the future? Do they plan to pivot their own strategy? Chapter 7, finally, puts the main findings into perspective and formulates a set of core conclusions and policy recommendations. What

lessons can Europe draw? What roles can profit and non-profit accelerators play in implementing an inspiring and challenging new European startup agenda? To conclude the book, I offer a practical decision tool that will help European stakeholders and entrepreneurs in making the basic choices of setting up accelerators.