The Role of the Kraftwerk City Accelerator in the Startup Ecosystem in Bremen

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Abstract

This qualitative study examines how the Kraftwerk City Accelerator Bremen (KCAB) supports the development process of the startup ecosystem Bremen using the eight capital model of entrepreneurial ecosystems by Juling et. al (2016) to categorize the collected data in the context of Bremen. Based on three qualitative interviews, a field observation and the use of secondary data, the findings indicate that the KCAB is involved in the development of the startup ecosystem Bremen. The study points out that the KCAB and its activities affect six of the eight capitals in the startup ecosystem Bremen. However, the KCAB has a strong influence especially on the networking effects within the ecosystem and further the supply of financing opportunities. Thus, the KCAB will play an important role in the development process of the startup ecosystem Bremen in the future.

1 Introduction

In order to provide an introduction to the topic, which to thesis is dealing with, the first chapter addresses, the problem considering definition and relevance. From this, the research gap and the research question be further defined. As well a short overview of how the thesis is structured be given.

1.1 Bremen: An Emerging Startup Ecosystem in Germany

Since Germany is a country with emerging startup ecosystems, research in this sector is becoming more important. Berlin is one example of successful development, ranking seventh in the Global Startup Ecosystem Report (Global Startup Ecosystem Report, 2016: 28). The German Startup Monitor shows that, besides Berlin, more regions are developing startup ecosystems. This development demonstrates that the German startup ecosystem is in motion and on the right path to sustainability. Bremen is also represented in the German Startup Monitor’s statistics. The comparison of 2015 and 2016 reveals a positive trend in the startup ecosystem in Bremen. In 2015, 0.3 percent of all startups in Germany were located in Bremen. In the following year, the number of startups in Bremen increased by 1.7 percent. That indicates a positive trend within this region. For the period from 2015 to 2016, Bremen and Saxony-Anhalt belonged to the fastest growing startup ecosystems in Germany. (Deutscher Startup Monitor, 2015: 15; 2016: 17)

1.2 Problem Definition and Relevance of the Research

There is no research that clearly proves how these positive trends arise in smaller startup ecosystems, or which drivers support the acceleration of growth and performance in these ecosystems (Global Startup Ecosystem Report 2017: 5). However, it is well known that startups play an important role in technological change. This creates an advantage for both the region and its citizens. To achieve the benefit, startups require a sustainable and strong startup ecosystem. Over time, a sustainable ecosystem will create thousands of jobs and will contribute to the innovation process, particularly in the region where it is located. While gaining sustainability, the ecosystem will generate an enormous amount of economic and social benefit (Isenberg, 2011: 1). This positive impact encourages the global interest in establishing a sustainable startup ecosystem (Mason and Brown, 2014: 26ff).

1.3 Research Gap and Research Question

As mentioned previously, the literature does not provide much information on how drivers support the startup ecosystem. There are some case studies of advanced ecosystems around the world (Motoyama and Knwolton, 2016; Kim et al., 2014; Witte et al., 2017), but research on small emerging startup ecosystems is rare. Therefore, this thesis will examine one of the drivers in the startup ecosystem in Bremen: the Kraftwerk City Accelerator Bremen (KCAB). This accelerator is...
the first ever in Bremen and aims at building up a sustainable and vibrant startup ecosystem. Subsequently, the following research question can be formulated: How does the KCAB support the development of the Bremen startup ecosystem?

1.4 Structure of the Thesis

In order to answer the research question, this academic work is structured as follows. The second chapter will focus on the conceptual background. It contains the definitions of accelerators and startup ecosystems, and introduces the capital model of entrepreneurial ecosystems. Furthermore, it includes a “State of Research” section, which serves as an overview on the current research on accelerators and startup ecosystems.

The third chapter will deal with the research approach. As this work is characterized by an explorative approach qualitative methods are used and the reasoning follows an inductive approach. Accordingly, three guideline interviews and a field observation deliver the data. Triangulation is ensured through different methods, and secondary sources are used to gather more information.

In the fourth chapter, the obtained empirical data will be presented for which the eight capital model of entrepreneurial ecosystems is used as a lens (Juling et al. 2016). The fifth chapter is composed of the analysis and discussion of the results. The discussion will compare the examined literature of the state of research to the obtained qualitative data. The conclusion in chapter six will briefly summarize the results and lay out the implications for practice and possible future research. Lastly, it serves to set out the limitations of this academic work.

2 Conceptual Background

In this chapter, the conceptual background is addressed in order to obtain a deeper understanding of the important topics that are fundamental regarding this thesis.

2.1 Startup Ecosystems

As described in the introduction, this thesis will follow the definition of startup ecosystems that will be given in the subsequent section. Furthermore, it outlines the current state of research in the field of those ecosystems and presents the eight capital model of entrepreneurial ecosystems (Juling et al. 2016).

2.1.1 Definition of Startup Ecosystems

The startup ecosystem consists of two components: “startup” and “ecosystem.” The German Startup Monitor defines a “startup” as a company that is younger than ten years of age. Its business models and technologies are innovative, and it is characterized by significant workforce and sales growth as well as expansion (Deutscher Startup Monitor, 2015: 12). The second component, “ecosystem,” can be defined as an area in which a community of interdependent actors are located (Stam, 2014: 2).

Stam and Spigel (2017) define the entrepreneurial ecosystem in one brief sentence as “a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory” (Stam and Spigel, 2017: 1). The definition of entrepreneurial ecosystems of Mason and Brown (2014: 5) is similar to that of Stam and Spigel (2017: 2ff). It can be described as a set of actors, organizations, institutions, and processes in a certain region. They are interconnected and generate a network of relations and ties. Without these relations and ties, entrepreneurs’ work is more independent and isolated, leaving them to find each other more through coincidence than in an effective and sustainable way (Freiling and Baron, 2017: 68). The whole network of an entrepreneurial ecosystem includes potential and existing entrepreneurial actors as well as entrepreneurial organizations and institutions like firms, venture capitalists, business angels, accelerators, incubators, banks, universities, public agencies, and financial bodies. Furthermore, ecosystems entail entrepreneurial processes such as business birth rate, number of high-growth firms, a degree of sell-out mentality within firms, and levels of entrepreneurial ambition (Mason and Brown, 2014: 5). Entrepreneurial action is fundamental for all actors within the entrepreneurial ecosystem. It is characterized by the pursuit of opportunities for innovation (Stam, 2014: 5). These sets of actors, organizations, institutions, and processes fuse to govern the ecosystem formally and informally. In this way, the performance of an entrepreneurial ecosystem is influenced (Mason and Brown, 2014: 5).

2.1.2 State of Research

To assess the role of accelerators within a startup ecosystem, a basic understanding of how startup ecosystems are structured is required. In recent research it is pointed out that each entrepreneurial ecosystem is unique (Foster et al., 2013: 8; Vogel, 2013: 446f; Yaribeigi et al., 2014: 2906). As the
local environment provides the initial position for the development of an entrepreneurial ecosystem, each region provides different strengths, weaknesses, and resources, all of which support the development process (Cohen, 2006: 5). There are several authors who offer different ideas about startup ecosystems, and they will be presented briefly in the next section.

Research by Foster et al. (2013: 7ff) suggests that an entrepreneurial ecosystem is made up of eight pillars: accessible markets; human capital and workforce; funding and finance; mentors, advisors and support systems; regulatory framework and infrastructure; education and training; major universities as catalysts; and cultural support. The research identifies differences in each startup ecosystem and points out that governments often adopt a regional focus on startup ecosystem policies. Moreover, it has been found out that three pillars are of great importance within the system. Entrepreneurs highlight accessible markets, human capital and workforce, as well as funding and finance as meaningful pillars. It has also been concluded that the issues entrepreneurs are facing around the world, are more similar than different, and that these similar issues can be observed in all regions. When it comes to established businesses, the research highlights the potential benefits they can offer early-stage companies. Established companies “provide important leverage for early stage companies.” Furthermore, the report discloses areas in which productive relationships are feasible as well as areas in which the relationship can have an adverse influence on growth. Further findings suggest that entrepreneurs are important “in the build-out of an entrepreneurial ecosystem.” Finally, it is mentioned that government and regulatory policies can either produce faster growth or can be an inhibitor to growth (World Economic Forum, 2013: 5f).

Spigel’s (2015) research considers attributes of entrepreneurial ecosystems that exist within the startup ecosystem. These attributes can influence each other and imply that there is no hierarchy of lower or higher elements. The model of attributes clarifies that multiple configurations are possible. Spigel’s findings suggest three major contributions to the study of entrepreneurial ecosystems. The first contribution deals with the “identification of various categories of attributes that constitute an ecosystem.” The second contribution relates to the different opportunities attributes can adopt. The last contribution highlights the relations between attributes. It is argued that, for example, social and cultural attributes prop up new material attributes (Spigel, 2015: 55f).

Isenberg (2011) has created a diagram of an entrepreneurial ecosystem with six domains. He illustrates the domains from the entrepreneurship perspective with the result that it constitutes the ecosystems as it impinges. The six domains are policy, finance, culture, supports, human capital, and markets. Further it is argued that these domains impact the entrepreneur’s decisions and success, but also mentions the lack of relations between them. The diagram does not provide a connection between the domains, with the result that it is difficult to recognize how impacts relate to the different domains (Isenberg, 2011: 6ff).

These recent studies focus on addressing the conditions, categories, or attributes inside a startup ecosystem (Foster et al., 2013; Isenberg 2011; Spigel 2015). They present a comprehensive overview of startup ecosystems, showing the structure of those systems. In this way, these holistic approaches cannot illuminate the daily operations and interaction, which influence the development. Thus, there is still a lack of research on relations between actors and how they support the development of those systems. Motoyama and Knowlton (2016: 2) argue that an understanding of the connections between these elements is essential to understand how the ecosystem works.

Therefore, Juling et al. (2016) provide a novel capital model of entrepreneurial ecosystems based on approaches in past literature. Within the Eight Capital Model, the structure of relations is determined more accurately compared to other recent approaches. Hence, the Eight Capital Model of entrepreneurial ecosystems provides a foundation for the present thesis and is described more comprehensively in the next section.

2.1.3 The Eight Capital Model of Entrepreneurial Ecosystems

This capital model of entrepreneurial ecosystems is based on eight types of capitals identified by Juling et al. (2016). Human and social capital are at the center of this conceptual model, as both are directly related to the entrepreneur. Human capital is based on entrepreneurs’ experience. Entrepreneurs create human capital through their knowledge, skills and, further, receive it from education, training, and workshops (Becker, 1975). Social capital is the next important type of capital within entrepreneurial ecosystems and arises through social interaction between individuals such as entrepreneurs or other actors within the ecosystem (Anderson and Miller, 2002). It indicates that social capital is the fundament of networks, which are,
essentially, made up of social interactions (Bourdieu, 1986). Financial, political, economic, and infrastructure capital enclose or surround the center of the model. These four types of capital are not directly related to the entrepreneur or other actors, but they are important pillars for the environment of an entrepreneurial ecosystem. Financial capital can be described as the financing requirement within the ecosystem. It is the only type of capital that can create other capitals, and this is due to its flexible nature. Political capital is expressed as policy decisions concerning the ecosystem. Additionally, policy makers have a strong influence on the development process of entrepreneurial ecosystems. They establish the framework conditions for a favorable business environment. When it comes to economic capital, this can be “determined by existing industries and consumers.” (Juling et al., 2016). In terms of entrepreneurial activities, existing industries contain several individuals who have human and social capital. These individuals can be potential actors within the ecosystem. Furthermore, consumers are essential for both startups and entrepreneurial ecosystems to succeed. It is important to emphasize that the economic environment has to be sustainable to obtain economic capital. The last of the four types of capital is infrastructure capital; this is commonly understood as the infrastructure of a region. Infrastructure capital can be divided into three categories: “(i) education & research infrastructure, (ii) physical infrastructure and (iii) support infrastructure.” The first category includes the infrastructure of education and research in the form of schools, universities, and research laboratories. The physical infrastructure is determined by “(i) access to internet and telecommunication, (ii) sufficient and affordable energy supply, (iii) transportation and logistics and (iv) affordable office space and co-working spaces” (Juling et al., 2016) and eventually impacts all kinds of business development. Finally, there is the support infrastructure. For entrepreneurs, a supporting infrastructure consisting of advisors, accelerators, incubators, and lawyers is essential for success. Thereby, accelerators and incubators support new ventures in their early stages with resources, mentorship, office space, networking, financial support and expertise. It can be assumed that the support of accelerators and incubators benefits the entrepreneurial ecosystem as they allow a lot of new ventures to appear in a short period of time (Juling et al., 2016).

Finally, cultural and historical capital complete the eight capital model of entrepreneurial ecosystems. Cultural capital is not directly related to the ecosystem. However, it can influence any of the types of capitals described above. Culture has an impact on nearly everything in a region. It can influence the mindset of the population, decision-making, and even, directly or indirectly, entrepreneurial activities. Besides cultural capital, historical capital also has a strong impact on society. Next to this, the influence of entrepreneurial activities is distinctly inferior to cultural capital. As every region contains both cultural and historical capital, the impact on entrepreneurial ecosystems varies depending on the region (Juling et al., 2016).

As accelerators play an important role in infrastructure capital, as well as in the whole ecosystem, the next chapter will give an overview of accelerators and their functions.

2.2 The Concept of Accelerators

To explain the concept of accelerators, this subchapter will first consider the definition of the term and, further, the current state of research, with current research findings being given.

2.2.1 Definition of an Accelerator

Several definitions of accelerators can be found in research. Authors point out that literature does not provide a universal definition of an accelerator (Miller and Bound, 2011: 8; Hofman and Radojevich-Kelley, 2012: 56).

According to Fishback et al. (2007), an accelerator is defined as “groups of experienced business people who provide services, office space, guidance, mentorship, networking, management services, knowledge, and expertise to nascent firms on an as-needed basis to help them succeed in the early stages of venture life” (Hofman and Radojevich-Kelley, 2012: 57). This provides a basic definition of what an accelerator is. However information is lacking regarding the structure of the framework.

Therefore, Miller and Bound (2011: 9ff) suggest five main features with which to define accelerators. The first feature deals with the application process. Accelerators offer a web-based open application process to ensure an international presence. The literature shows that various founders of startups are migrants to the country in which they live (Global Startup Ecosystem Report, 2016: 40). Furthermore, the second feature describes pre-investment; accelerators provide an investment in the early
stage in return for an equity stake. The third feature focuses on the startups themselves. Accelerators prefer to support a team rather than individuals. They argue that founding a startup and participating in the accelerator program is too demanding for one person. The fourth feature is the time limitation. The support offered by accelerators relates to a certain period of time. Several authors characterize this attribute as a boot camp for startups (Dempwolf et al., 2014: 6). The last feature suggested by Miller and Bound (2011) is the fact that startups participate in cohort batches to guarantee a co-working atmosphere, as this is a key part of accelerator programs.

These features have been developed by Miller and Bound (2011) and extend the definition of Fishback et al. (2007) by considering the structure of how accelerators behave. Therefore, this thesis will follow the definitions of accelerators described above.

2.2.2 State of Research

The current state of research reveals a lack of empirical studies. There are various case studies that were conducted in the past (Cohen and Hochberg, 2014; Dempwolf et al., 2014; Fehder and Hochberg, 2014). Thus, there is a gap in the structured data on accelerators. This is partly due to the private nature of accelerators and their novelty (Tasic et al., 2013: 11).

As a new form of supporting and developing business startups, the accelerator originates from known models such as incubators and business angels. They appeared due to the lack of previous incubation models and the smaller amount of supporting activities that they offered (Brunee et al., 2012). Dempwolf et al. (2014) go further and state that “the systemic lack of coordination among the various partial programs and incubators’ specific limitations may have helped create the niche market for accelerators.” (Dempwolf et al., 2014: 18). The American accelerator Y Combinator was an outrider in this new concept of accelerating business startups and appeared in 2005 in the United States. The founding of this accelerator launched an upswing of emerging accelerators that lasted for the next decade (Pauwels et al., 2015: 13; Barrehag et al., 2012: 19).

Several authors offer a distinction between accelerators, incubators, and business angels, because of their similar natures the literature draws a clear differentiation between the different types of supporting programs (Isabelle, 2013; Cohen, 2013; Cohen and Hochberg, 2014).

Hallen, Bingham, and Cohen (2014) carried out an empirical study to investigate the impact of accelerators on startups. More precisely, a comparison of participating and non-participating startups in terms of follow-on investments. Their findings suggest that startups, which participated in top accelerator programs, have a better chance of receiving capital investments. It seems that over time the success of top accelerators correlates significantly with their experience and their established networks. Furthermore, the authors found that the success of startups within accelerator programs enhances as the accelerator’s learning process progresses. Thus, an established and experienced accelerator increases the quality of participating startups. In the same context, Hallen, Bingham, and Cohen (2014) provide a critical view of accelerators and use confirmed organizational theories to examine the acceleration in such accelerator programs. Their research suggests that, in accelerator programs, the compression of information and knowledge causes trade-offs due to time compression diseconomies (Dierickx and Cool, 1989; Levinthal and March, 1981; Vermeulen and Barkema, 2002). As a consequence, participants may absorb less knowledge and fewer skills. Further research results indicate that there is no overall accelerator effect. In summary, their findings suggest that there are several differences between accelerators, with some providing a stronger acceleration than others (Hallen, Bingham, and Cohen, 2014: 5; 2016: 21).

Salido et al. (2013) examine the accelerator and incubator environment in Europe, using several case studies based on the most important economies. In this way, seven key findings have been identified. Firstly, Europe is characterized by an early-stage startup scene. Nonetheless, Europe and the US are similar when it comes to the number of accelerators per capita. Secondly, the authors identified a distinct growth in the number of accelerators since the financial crisis (2007-2013). Another finding indicates that diversity among accelerators is due to the rapid growth of accelerator programs. Further key findings highlight the lack of data and irregularity in terms of the amount of equity taken from startups.

An inductive study of accelerators presented by Clarysse et al. (2015) offers an analysis of internal systems followed by a distinction between different types of accelerator. The findings categorize accelerators into three different types. The first type is the accelerator established by investors with an elaborated business model. Another type is the public accelerator, which originates by public authorities such as policy makers to reduce the
failure of early-stage startups. And, finally, the matchmaker accelerator, created by cooperatives with the overall goal of connecting participating startups with their customers and stakeholders. The latter is mostly non-profit and offers no financial support. The author describes it as a platform to link the financial services industry with early-stage startups.

Miller and Bound (2011) regard the accelerator program as a spreading business model to support startups and founders in their early days. They conclude that, on the one hand, the accelerator phenomenon is an emerging model. However, on the other hand, the effectiveness of this model has not yet been proven. Furthermore, they argue that there is no universal strategy for establishing an accelerator. Additionally, the success of accelerators depends on how well the founders and officials, who administer the program, learn from experience, improve and iterate their service to startups. Finally, they suggest that accelerator programs bear high potential as for speeding up the growth of ecosystems (Miller and Bound, 2011: 37).

The research of Clarysse and Yusubova (2014) provides a multiple-case study, examining the success factors of accelerators in Europe. Three success factors can be described according to them: “Selection process and criteria, business support services, and networks.” Furthermore, the theoretical aspect of their multiple case study suggests a better understanding of the success factors relevant to accelerators.

From recent research (Zucker, 1987; DiMaggio and Powell, 1983; Kondra and Hinings, 1998) it can be concluded that carefully considered institutional alignment improves the survival and legitimacy of organizations. Legitimacy is given when the success factors mentioned above are well organized and developed. This makes legitimacy a major success factor as it gives stakeholders a perception of safety when the accelerator is constituted correctly (Deephouse and Suchman, 2008; Zimmerman and Zeitz, 2002; Kondra and Hinings, 1998).

3 Methodology

The aim of this work is to answer the research question and, furthermore, gain a deeper understanding of the subject matter through a single case study. Therefore, the main part of the thesis will consist of a qualitative research, conceptualized to bring the perspective of the relevant group into focus and achieve a more open and flexible research design (Voss 2014: 21). That is important because, as startup ecosystems and accelerators are a young research field, this thesis will have an explorative character. This shall allow a deeper understanding of the concepts of startup ecosystems and accelerators to be gained.

As mentioned in the introduction, this thesis tries to identify how accelerators support the development of a startup ecosystem. The single case refers to Bremen, selected as it is currently in an early stage of developing a startup ecosystem. Regarding the early development phase, research in this field is important to understand the startup ecosystem in Bremen. Furthermore, a case study approach is “well-suited to new research” fields such as those found in this study (Eisenhardt, 1989: 548ff). Against this background, a case had to be chosen. The study uses the KCAB and examines how this accelerator supports the development of the startup ecosystem in Bremen. In order to understand how the KCAB works, the next part of this chapter explains the framework and the conditions thereof.

The KCAB, founded in 2015, is the only standardized accelerator program in Bremen. Its basic idea is to find motivated entrepreneurs and startups that are creating sustainable ideas regarding the city of tomorrow. The overall goal is to bring these entrepreneurs together in order to meet these challenges. Therefore, the program deals with themes such as energy, transportation, waste disposal, and recycling. Furthermore the entrepreneurs have the chance to apply via the KCAB website in order to win the Smart Tech Trophy. Every time a call is launched for applications, the accelerator announces a different focus or theme within the energy field. For the application, the entrepreneurs just need to have a compelling idea relating to the advertised theme. After a pre-selection by experts, the best applicants have to pitch their idea in front of a jury. The jury is composed of experts, managers of partner companies, professors from universities in and around Bremen, and economic experts. In addition to a sovereign pitch, the feasibility of the idea is of the utmost importance. The jury selects the winning teams, with first, second, and third place receiving a financial award. Afterwards, the jury selects the best ideas from all the participants and offers them a place on the one-year support program. This program is divided into three phases, starting with the bird phase. The content of this phase is the development of business models, market analyses, team building, founder workshops, and also access to a founder network. The second phase is the nest phase, in which the founder starts to prototype their idea. Furthermore,
the founder will learn marketing techniques and how to build up an organization structure. The third phase, called the jump phase, includes sales organization and organization development. In this last phase, the KCAB provides further venture capitalist connections. The accelerator is located centrally near the main train station in Bremen and offers a co-working space with separate meeting rooms, an event area, and a thoughtfully designed office infrastructure. During the entire program, tutors from swb AG and the Mercedes-Benz factory support the startup teams. They organize community events and collaborations with other startup teams. Additionally, the actors on the accelerator side provide intensive coaching, consultation regarding financing opportunities, assistance in company structure, and various workshops (Factsheet Kraftwerk Accelerator Bremen, 2016).

Based on the qualitative research design and the explorative character of this thesis, interviews and a field observation were conducted. They confirmed the validity of the inductive approach used in this work, which was chosen as the literature does not reveal a general theory in this research field. For this purpose, the data selection was composed of three interviews, a field observation, and the use of second sources. The interviews followed a semi-structured construction in order to gain deeper insights. This left the opportunity for interview partners to answer freely, without limitations, with the result that openness and flexibility were guaranteed (Lamnek, 2016: 319ff). To ensure that all important aspects were addressed, the interview followed a guideline (Kromrey, 2000: 364). Interview partners were selected from a small group of prospective candidates. Against the background of the research question, one director from the KCAB and two startups were selected. One of the startups is a participating startup and the other one has already completed the accelerator program. Thus, the thesis has the perspective of an initiator on the one side and the perspective of startups on the other. The interview with the director was conducted in German, while the interviews with the startups were in English. Two separate interview guidelines were drawn up because the director’s perspective may provide different information compared to the startups (Kaiser, 2014: 53). The interviews were recorded, as recommended by Lamnek (2016: 368). Further information was collected through a field observation. As the research field is difficult to access due to insufficient research and its young nature, it was important to use different social science methods. Therefore, the field observation allowed an active participation in a natural environment within the accelerator and aimed at exploring interaction patterns through accurate observation. Thus, a deeper understanding of the observed natural environment could be ensured (Lamnek, 2016: 516ff).

The use of different socio-scientific methods contributes to considering the phenomenon from different perspectives. Thereby, the field observation supplements the interview by information and insights, which are determined by participation in the active interactions. As a consequence, triangulation can be guaranteed. According to Flick (2011: 15ff.), validity is ensured by the composition of the methods used and an increase in reliability can be obtained by applying different methods.

The methods employed present several limitations. The field observation is related to a personal perception and, thus, may offer a limited grasp of information. Ultimately, the observer can only use his eyes and ears to gather information. Moreover, the observation can only show snapshots of the overall social interactions, although this is justified by the limited time (Lamnek, 2016: 520ff).

The evaluation of the interviews is separated into four phases. It starts with the transcription. Afterwards, the interviews are analyzed individually to highlight the main passages. The next step involves the examination of similarities and type generalizations. The last phase comprises the control of misinterpretation. Therefore, the analyzed material is constantly compared to the entire transcription (Lamnek, 2016: 380ff).

Thereby, the capital model of entrepreneurial ecosystems is used to categorize the information. The results of this case study are rich in detail, which makes it more complex to generalize from the results. Since only a single case study was used, it is difficult to investigate whether a result is important in general or whether it is merely related to Bremen (Eisenhardt, 1989: 547).

4 Results

In the following chapter, the collected qualitative data is compared to the presented literature to illustrate similarities. As the qualitative data does not contain insights regarding cultural capital and historical capital, both were excluded. To classify the obtained perceptions, the previous described eight capital model is applied. Thus, findings are displayed and separated into human capital, social capital, economic capital, financial capital, political capital, and infrastructure capital.
4.1 Human Capital

Regarding the role of human capital within the KCAB, the interviewees mentioned the support by mentorship such as inviting pitch trainers, who help startups to develop their present pitch presentation step by step, from bird-phase to jump-phase. Accelerator manager A stated in terms of pitches, that in each phase the startups have to convince different audiences to be successful. Furthermore, the KCAB support founders in scaling the startup by business experts, who have the experience and capabilities at one’s disposal, as indicated by the startup founder A. Besides, the officials of the accelerator show interest in promoting the startups in Bremen. Moreover they have the capabilities to promote startups in terms of networking, as startup founder A stated. Another aspect, which belongs to human capital, is the provision of co-workers, who work independently. Thus, it implies co-workers as an additional workforce. Hence, startups have the opportunity to outsource a certain amount of work to co-workers. Besides, co-workers confer startups in different disciplines. Accelerator manager A mentioned the combination of startups and co-workers to produce a cultural cross section within the program. Following from this, the combination creates an open atmosphere, as it is typical in the startup culture. However, startup founder B said that he would like to see more co-workers and freelancers within the accelerator to provide more different services startups can use. Furthermore, he sees a lack of different disciplines, like people with design and media skills, to use their service as well. By participating in the program, the swb AG tries to guarantee the allocation of one or two tutors to each startup, if the capacities allow it. The task of tutors is to support and help startups with information about contracts, legal aspects and the drawing up of a business plan. Another point is, that tutors should be the link to the swb AG, as accelerator manager A explained. But at the same time, he pointed out the meaning of working together with a startup. Tutors from the swb AG have to learn, what it means to work with startup’s. Usually, they are working with established companies, which are quite different in organizational and structural aspects. In this way, he mentioned the non-existent hierarchies and the speed of growth of the business, as well as the fact that some of the startup’s are in an early stage of creating a business. In this context, startup founder B talked about his experience with regards to working with the swb AG itself. By dealing with operational people from the swb AG, he pointed out the decrease of acceleration as those people do not have the experience in working with startups. He considers this progress as a challenge for the swb AG and its accelerator.

In terms of mentors like successful businessmen with experience and knowledge in starting a venture, startup founder B referred to the absence of these people. Thus, a lack of knowledge sharing and advices from the mentor side, which support, help and accelerate startups in growing their ventures, becomes evident. Accelerator manager A highlighted that one of the partner of KCAB (EWE) plans to organize boot camps for startups in nearby future. These boot camps should have capacities to take up ten to 15 startups. The event arena within the KCAB should, therefore, be used as the location for boot camps. Within such a boot camp, the overall goal is to push and accelerate the process of creating a startup business. Furthermore, he considers to organize these training camps at least four times a year to achieve a measurable value. The accelerator manager A referred to a more external use of the accelerator facilities, when he stated that the space is moreover used for employee education and developing ideas within the companies of partners (Mercedes-Benz, EWE). Due to the universities and the universities of applied science, the environment in Bremen provides a high educational level, which is beneficial to start-ups in terms of employee recruiting. Proceeding from the international team within the accelerator, universities provide a high number of international students. Startups search for those students, because of their international education and their social and business networks. For example, startup founder A reported that they recruited a student from the Jacobs University.

4.2 Social Capital

For social capital, different kinds of relations are fundamental. Along these lines, accelerator manager A said that within the accelerator the atmosphere and hands-on mentality drive the creation of relations as well as the open-minded climate. Furthermore, he regarded the culture within the accelerator as a very important characteristic. Additionally, he mentioned the familiar working behavior of start-ups, which emerge through the typical open, friendly and helpful atmosphere. Therefore, the managers changed the office space formation from separate group tables into one large table to promote the interaction of all actors within the accelerator program, as startup founder A explained. Regarding the atmosphere, startup founder B also
mentioned that it is helpful to work in an open co-working or office space. It strengthens the interaction between participating startups. As a result, the interaction affects the atmosphere in a positive way. He further explained that by making small talk, employees interact and talk about, for example, their success and problems which occurred initially when starting a business. This is underpinned by startup founder B when he said that startups within the accelerator share information about software solutions or tools that can be easily used to optimize certain processes. Besides that they provide advice to other startups based on their experience. In that respect, the accelerator manager A cited an example, which emphasizes the advantages of this interacting atmosphere. One of the startups in the last batch developed a sensor technology to monitor parking spaces. Another startup developed an automatic electric vehicle changing stations and a third startup developed smart lights. Due to problems with the changing stations in terms of, whether the parking spaces are occupied or not. Especially, when someone is merely using the parking space. In this context, the startups on smart lights and sensor technology are able to use their technology to prove whether a parking space is occupied or not. This collaboration only occurs if participating startups interact and talk about their experience and problems. At the beginning of the program, batches are invited to different sport events to meet each other. These visits are part of the teambuilding activities, as startup founder B described. In addition, he reported that during the program he became good friends with participating people. Within the program most of the startups come from different countries to take part in the KCAB. According to the open-minded atmosphere and hands-on mentality, startups share their international networks with each other, with the result that they spread their existing networks. In terms of social capital, all interview partners stressed the importance of networking for startups as well as for the accelerator. Therefore, startup founder A stated that according to the young nature of the KCAB, networking is a very important aspect to evolve the accelerator and its environment. In this regard, the accelerator is located in an early stage of developing a sustainable network that complement to each other. The existing network based on the accelerator provides connections to local companies as the organizational structure of the accelerator allows companies to cooperate with them. Mercedes-Benz and EWE are current partners of the KCAB and certainly the swb AG. Especially the swb AG provides a large network in Bremen, because it supplies energy to nearly all residents and companies. According to networks, the cooperation with those companies increases the scope of networking, as accelerator manager A said. Furthermore, the KCAB is connected to universities in Bremen and Oldenburg. There are meetings with professors from universities to talk about potential improvement in different areas. For example, accelerator manager A organized a meeting to talk about the need of a counsellor, which provides advice and support to the accelerator itself. Additionally, he is networking with government officials and public institutions like Bremer Handelskammer and Wirtschaftsförderung to foster the development of a startup ecosystem in Bremen. During the field observation, the Wirtschaftsförderung invited startup founders from Groningen on a guided tour through the startup hot spots in Bremen. They visited the KCAB and presented their startups in a short pitch. Afterwards, the group had the opportunity to talk in an open atmosphere to managers, co-workers and startups from the KCAB. Thereby, it appeared as if those people are markedly interested in networking in form of exchanging contact information’s. According to successful businessmen and funding opportunities, like business angles and venture capitalist, startup founder B mentioned a lack of a financial network. In terms of events, which foster the development of networks, startup founder B said that there are only a few startup events in Bremen and that it is incomparable to Berlin. Besides, accelerator manager A mentioned the efforts of his team to set up regular meetings for startups and other actors in the facilities of the KCAB. But there has not been the expected resonance they had hoped for. Furthermore, he mentioned that there are efforts of universities in terms of organizing events like pitches or startup weekends.

4.3 Economic Capital

Regarding the existing industry, accelerator manager A mentioned Bremen as a great location for business. Crucial for that are already established companies. Especially Mercedes-Benz, Airbus, swb AG and BLG are international acting companies with a large awareness. Moreover, the city provides strengths in logistics, ocean engineering and space engineering. He further stated that Bremen, as location for business, is not to be underestimated. Proceeding from the companies mentioned above, the swb AG is a major Bremen-based company. Accelerator
manger A explained that the KCAB was founded by the swb AG and benefits from their business field. As the swb AG is the largest energy supplier, they supply energy to nearly every industry and household in Bremen. Thus, they are able to provide their large customer network to participating startups to connect them with potential B2B or B2C clients. Another advantage for startups, proceeding from the swb AG, is that they open the company facilities for their startups. The swb AG affords an opportunity to use their facilities in terms of proving their technology or developing prototypes.

Furthermore, accelerator manager A stated the need of partners to admit more startups within the KCAB. As the city of Bremen provides several international companies, the number of potential partners is sufficient. Unlike expected, the search for potential partners emphasized as a challenge for the accelerator manager. Crucial for this challenge is the location of headquarters of local companies, as he explained. For example, the headquarter of Mercedes-Benz is located in Stuttgart and the one of Airbus is located in Paris. The involvement in the KCAB is a business investment. Thus, it is a strategic decision for companies that is decided by the head office. In this context, startup founder B criticized the connection to the local industry. He mentioned that they have to work on linking their startups to those companies by inviting them more often to the facilities of the KCAB, with the result that startups can easily talk and connect to the local industry.

Moreover, the accelerator manager A remarked that the employment market around Bremen offers sufficient capacities. However, startup founder A countered with the difficult access to low-cost talents in form of students and employees. On the contrary, startup founder B said that Bremen has a high rate of employment, enabling startups to cover their requirement of employees.

4.4 Financial Capital

The accelerator program provides one year of funding for participants to give them the opportunity to concretize and develop their idea. After one year of funding and the exit of the program, the accelerator confers the opportunity to achieve ongoing funding. Therefore, the accelerator manager A explained that the overall goal is not to buy those successful startups after they leave the program. On the contrary, the accelerator is more interested in a cooperation with those startups to keep the particular structure of startup ventures, like fast decision making, small hierarchies and the speed of growing the venture. Startup founder A stated that after leaving the program, the accelerator provides the use of the co-working space and the opportunity for further funding. Nonetheless, the equity stake supports the intention of giving an ongoing support. After the engagement of Mercedes-Benz and EWE as a partner, the capacities for funding increased within the KCAB.

As financial resources are very important to startup founders, the interview partners agreed on financial capital as a need of improvement. Accelerator manager A pointed out the minor external funding possibilities around Bremen. There is a lack of venture and risk capital and, therewith, an incomplete network of financier like business angles or venture capitalist, which is necessary to build up a sustainable financial environment for startups. In this context, startup founder A stated that they access funding mostly online or search for opportunities on conferences which they attend. A similar statement was made by startup founder B when he said that connections to outside funding do not exist at the present time. Furthermore, he mentioned that startup founders search for outside funding mostly on their own. This implies that Bremen has to develop more funding opportunities alongside the accelerator and other similar programs and institutions like team neusta. In that regard, the accelerator manager A mentioned the successful businessman as an opportunity to generate more funding opportunities. He also hoped to convert the businessman to be a part of the startup community in Bremen. He argued that people like that could have an important impact on the startup ecosystem Bremen in terms of financial capacities and mentorship.

4.5 Political Capital

As a driving force of developing the conditions for a sustainable ecosystem, policy in Bremen is motivated to work on this development process as accelerator manager A explained. He noticed that the city is willing to cooperate together with the Wirtschaftsförderung and KCAB officials to create better conditions for startups. Thus, it appears that the accelerator is a perceived actor in the overall ecosystem, which is contacted to talk about adjustment of the environment and room for improvement. Startup founder B mentioned that at the beginning of the program several government officials presented all the options they have within Bremen. Over the course of the field observation, a delegation of startup founders from Groningen was invited by the Wirtschaftsförderung to have a look
at the KCAB and the Bremen startup scene. For one day, officials from the Wirtschaftsförderung and other government officials guided the delegation from the KCAB to Weserwerk and further supporting institutions. This implies a collaboration between the Wirtschaftsförderung and the accelerator. Furthermore, accelerator manager A mentioned that they founded three startups within the last year. In doing so it can be seen as a contribution towards the Wirtschaftsförderung, which benefits from growing business formations. For startups, the accelerator provides access to networks of government officials. This is essential for startups when it comes to founding a venture. In this context, startup founder A mentioned the friendly and helpful manner of government officials like Finanzamt, Handelskammer, and other public institutions, as well as the good support for startups. He further highlighted the booking of meetings with government officials as simple.

4.6 Infrastructure Capital

As the infrastructural capital is divided into three components the first component is about education and research institutions. Within Bremen, accelerator manager A mentioned a well-developed network of education opportunities. Besides the University of Bremen, several other universities of applied science and the private Jacobs University are located in Bremen. Thereby, the access to research facilities, which can be used by startups, is given. In terms of research about entrepreneurship, the University of Bremen provides a chair in small business and entrepreneurship (LEMEX). Moreover, the Jacobs University is willing to cooperate with the KCAB. As accelerator manager A reported there are efforts in idea development of students. During their study, they have to complete a practical semester. The conception is to give students the opportunity to work on ideas and elaborate on them within the KCAB.

In terms of the second component, the physical infrastructure, accelerator manager A mentioned Bremen as an outstanding location for logistics. There are several logistic companies located in Bremen. In that way, the logistic industry profits from the harbor, which provides good opportunities for startups to expand as startup founder A said. Following physical infrastructure, accelerator manager A regarded the manageable size of Bremen as well as a clear amount of actors as positive within the startup community. This would foster the communication between those actors, in terms of shorter decision-making processes. In this context, startup founder B said that the city is well-connected and affordable to live which contributes to time savings. He also mentioned the central location of Bremen within Germany and added that the distance to Hamburg, Berlin and the Netherlands is short. Thus, besides Bremen, the more international airports in Hamburg and Hannover are easy to reach. Another point is the well-developed infrastructure of the rail network in Germany. The central station in Bremen is reachable without great efforts from the facilities of KCAB. According to the central location of the KCAB, people can reach nearly everything in Bremen by streetcars, busses or by foot.

The third component deals with the support infrastructure. At this point, accelerator manager A stated that in connection with support institutions or programs (besides team neusta which is specialized in IT and the KCAB), merely a few supporters in cultural fields exist. In terms of office space, he sees the possibility to take up 20 to 30 startups per program. Regarding the provision of office space, the present capacities of the KCAB are underutilized. During the field observation, construction work was realized on additional office space within the KCAB. The infrastructure of professional advisors like successful businessmen is lacking, proceeding from statements from startup founder A and B. This does not imply that these people do not exist, but they are not directly connected to the startup community at the present time.

5 Discussion

In the following, the insights gained from the conducted literature research as described in the second chapter will be compared to the collected qualitative data, which was presented in detail in the previous chapter. By this, the comparison will be further served to examine its validity. The perceptions from the qualitative data show a connection between the KCAB and public institutions of the city. Regular meetings with government officials imply the KCAB as a contact within the emerging startup community Bremen. As research by Foster et al. (2013: 5) points out that governments adapt a regional focus on startup ecosystems policies, the KCAB provides knowledge about the startup community from the inner perspective to support the government in developing a favorable environment. In this context, Mason and Brown et al. (2014: 5) stated the set of actors, organizations, institutions, and
processes, which affect the performance of entrepreneurial ecosystems. As this set of actors includes policies and government officials as well, the collaboration between them and the KCAB can promote the development and performance of a favorable environment. Certainly, Foster et al. (2013: 5) suggests that governmental and regulatory policies can, for one thing, produce faster growth and, apart from that, be an inhibitor for growth. That implies that the KCAB impacts the development process due to the provision of inner information to policy and government officials and, additionally, link startups with the government and policy. However, impacts can be positive as well as negative in terms of decelerating the growth. Along these lines, the KCAB influences the establishment of political capital within the eight capital model of entrepreneurial ecosystems (Juling et al. 2016).

Regarding the financial capital, the interviews show a lack of funding opportunities within Bremen. According to Isenberg's diagram of entrepreneurial ecosystems, which consists of six domains (policy, finance, culture, supports, human capital, and markets) and the proposition that each domain impacts the entrepreneur's decisions and success, it implies that funding opportunities are crucial for entrepreneur’s as well as for entrepreneurial ecosystems. In this context, the KCAB provides pre-investment for participating startups in return for an equity stake. Concerning Fishbacks et al. (2007) definition of accelerators, the provision of networks includes potential funding opportunities. Startup founders A and B criticize the connection with different funding opportunities within the program. Based on all interviews, the KCAB itself confirms the possibility for an ongoing funding after leaving the program. Thus, it implies the KCAB as one of a few funding opportunities in Bremen. However, it does not close the gap of funding. There are surely potential funding opportunities. Accordingly, it is an untapped resource and it is not connected to the startup community currently. Regarding to the eight capital model of entrepreneurial ecosystems, the accelerator has a minimal effect on financial capital.

In spite of minor funding opportunities within the KCAB, two startups were founded in 2016. That indicates that over time various startups will be found out of the KCAB. These startups will then acquire experience during their growth. Thus, they can be an issue in terms of advisors and experience business mentors within the entrepreneurial ecosystem Bremen. This corresponds to the statement of Manson and Brown (2014: 5) that the whole network of entrepreneurial ecosystems includes potential and existing entrepreneurial actors. Furthermore, it indicates that the KCAB has an effect on those entrepreneurial actors in terms of yielding potential entrepreneurial actors. Besides, after leaving the program startup ventures can establish their business in the entrepreneurial ecosystem Bremen. As the definition of startups determine a startup by a significant workforce and sales growth and expansion, startups of the KCAB can grow to become a Bremen-based established venture.

Considering established firms, the KCAB provides the connection to firms like Mercedes-Benz, EWE or swb AG, which are directly related to the KCAB. According to Foster et al. (2013: 20ff), established businesses have potential benefits they can offer early-stage companies in terms of providing “important leverage for early stage companies” (Foster et al., 2013: 8). Proceeding from the statements of startup founders A and B, which criticize the cooperation with those companies as insufficient. In this context Hallen, Bingham, and Cohen (2014: 26ff) mentioned that the success of accelerators is closely linked with their experience over time and their established networks. It implies that those connections to established firms and their cooperation evolve by experience, which they gather over the years. Therefrom, the economic capital within the startup ecosystems is given in terms of established firms, but not developed sufficiently. Furthermore, the economic capital entails potential customers as well. The structure of the KCAB enables the cooperation with established companies, as it is similar to cooperate accelerators. Both interviews and the literature concur regarding to connecting startups with potential customers provided by the customer base of those companies. Assuming Clarysse, Wright, and Van Hove (2015: 5ff) statement that accelerators can be classified into three different types, the matchmaker accelerator is similar to the KCAB. Established by cooperates, the matchmaker accelerator connects participating startups with their customer base and stakeholders, is usually non-profit and offers no financial support. As the KCAB is both for-profit and offers financial support, it does not fit exactly in any of the three outlined types.

Furthermore, the KCAB is involved in building a sustainable network for an entrepreneurial ecosystem in Bremen. As the definition of entrepreneurial ecosystems of Manson and Brown et al. (2014: 5) determines it as a set of actors, which generate a network of relations and ties, the KCAB can play a central role. According to the
interviews, the KCAB is situated in developing a network to various actors within Bremen. Thus, it implies that the overall emerging entrepreneurial ecosystem Bremen profits from the networking of the KCAB in terms of relations to universities, public organizations, policies and established firms. Another point is that the KCAB facilitates the growth of a sustainable network in Bremen. According to the interview of startup founder B, the international presence of startups within the KCAB promotes the international advancement of this network. In this sense, the KCAB makes an intense contribution to the development of social capital, especially in connecting various actors within Bremen.

Concerning infrastructural capital, the KCAB as a supporting program is situated in the support infrastructure, due to its efforts of supporting startups by providing office space, workshops, pitch training, co-working, financial support, and networks. As the presence of supporting institutions or programs is limited in Bremen, the KCAB can be of significance. Therefore, the specialization on energy topics benefits the growth due to minor supporting activities in this field within Germany. As infrastructural capital is separated into three categories “(i) education & research infrastructure, (ii) physical infrastructure and (iii) support infrastructure.” (Juling et al., 2016). The KCAB itself is situated in the support infrastructure. In this context, the qualitative data delivers certain supporting activities. The interviews and secondary data illustrate workshops, mentorship, co-working, financial support and office space as supporting activities. This corresponds to Fishbacks et al. (2007) definition of accelerators. As a consequence, the KCAB contributes to the emergence of infrastructural capital in the field of support infrastructure.

6 Conclusion

As various actors have an impact on the development of startup ecosystems, the goal of this thesis was to investigate the role of KCAB within the startup ecosystem Bremen. Therefore, the eight capital model of entrepreneurial ecosystems developed by Julia et al. (2016) served as a basis to categorize the supporting activities of the KCAB into those capitals. Thus, an evaluation of how the KCAB contributes to the development of a startup ecosystem in Bremen was possible.

In summary it can be said that the KCAB has an impact on all presented capitals. Thereby, the measurable impact distinguishes among these capitals. However, based on the eight capital model of entrepreneurial ecosystems findings demonstrate that the KCAP supports the development of a startup ecosystem in Bremen. According to infrastructural capital and, in this way, the support infrastructure, the KCAB is one of two major supporting programs or institutions due to their efforts of supporting startups with workshops, mentorship, co-working, financial support, networks and office space. Accordingly, the KCAB itself provides a substantial contribution to infrastructural capital. Concerning financial capital, funding opportunities are barely available. As Bremen lacks in activated venture capitalist and business angels, the accelerator itself provides funding for startups. Further findings suggest a distinct industry within Bremen. As the KCAB is directly connected with swb AG, Mercedes-Benz, and EWE, startups benefit from knowledge, technologies and an access to customer bases companies offer. Based on the industry, the KCAB may be the juncture within the emerging startup ecosystem Bremen. In terms of political capital, regular meetings with policies and government officials together with KCAB managers imply an exchange of information to foster the development of favorable conditions for startups. According to the literature, government and policies can either accelerate or decelerate the growth of startup ecosystems. Summarizing social capital, networks seem to be an important aspect in terms of the contribution of the KCAB. More precisely, the KCAB is connected to universities as well as universities of applied science, established firms, public organizations, and policies. Finally, over time the accelerator gains in experience and improves its program and supporting activities. Therefore, it will found several startups in the future. It can be concluded that the KCAB has another effect on social capital in terms of yielding advisors and successful businessmen, which may support startups in the future.

The obtained perceptions based on the qualitative data are carefully to consider due to the limited time and modest extent of the collected quantitative data. Additionally, the dynamic of this research field makes it difficult to present perceptions, which can be generalized for further researches. As present researches mainly investigate startup ecosystems and deduce from this perspective on accelerators, this work contributes research on the impact of accelerators within startup ecosystems by providing conceptual knowledge for future research. Especially, research on German accelerators and startup ecosystems are barely conducted. Thus, this thesis should have delivered initial insights for further research on these topics.
in Germany. Considering the absence of cultural and historical capital within the findings, future research should apply the impact of both capitals within startup ecosystems.

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