

# Accelerators as a Driver of Startup-Ecosystem

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## *Abstract*

Since the establishment of the Y-Combinator in Silicon Valley in 2005, accelerators are an ever-growing phenomenon that beginning with the United States is representative on six continents until today. This should not be surprisingly as nowadays, startups seem to be a major source of innovation, contributing to the invention of novel products and business models by using new technologies and thus are reasonable to secure the secure and development of local economies.

To be defined accelerators are institutions that support high-growth, early-stage businesses support to create entrepreneur's ideas into sustainable business models through education, mentoring and funding. In counterpart to the until today better known model of incubators accelerators differ as they are limited to a shorter period of time of approximately three month, which leads to the recognition of a higher intensity that as a result shortens to time to discover the sustainability of businesses.

Nevertheless, there is still a lack of a deeper understanding of the phenomenon of accelerators itself and their role, especially in the matter of the success to create sustainable business models. Thereby as accelerators are parts local economies their influence and power cannot be seen to be isolated so that this paper investigates the role of accelerators as agents of change as a result of the dynamics of the interplay of the actors of the local startup ecosystem, they are settled in.

As this paper can be seen as a first path of investigation of the underlying phenomenon the research aim to guide and pave the way for further researches by examining previous contributions and after that elaborating a research approach that can be followed in the future. Therefore some advice regarding to research approach, data selection and sources of data collection is recommended.

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## **1 Aim of the study**

### *1.1 Practical, Political and Societal Relevance*

Startups nowadays are a main source of innovation, caused by their employment of emerging technologies to invent products and reinvent business models (Kohler 2016: 347). In startup communities the phenomenon of accelerators is playing an increasing role throughout the United States and beyond (Hathaway 2016b: 2). The Y Combinator is considered as the first accelerator, which was founded in 2005 by Paul Graham in Cambridge, Massachusetts, and soon moved and established itself in Silicon Valley. David Cohen and Brad Feld, two startup investors, build up another accelerator called TechStars in Boulder, Colorado in 2007 with the objective to transform its startup ecosystem through the accelerator model. Today the number of accelerators is growing rapidly, which is shown by estimates which range from 300+ to over 2000, spanning six continents (Cohen & Hochberg 2014: 2). The task of startup accelerators is to support early stage, growth-driven companies through education, mentorship, and financing. Startups join accelerators for a fixed-period of approximately three months as a part of a cohort of companies

(Hathaway 2016a: 1-2; Cohen & Hochberg 2014: 4).

Contributions indicate that accelerator have a considerable impact in field of entrepreneurship and beyond. Thus further research to discover accelerators role in ecosystems can be seen as relevant and profitable for numerous sectors.

In this context practically accelerators help angel investors who are financially involved in companies and support the entrepreneurs with know-how and contacts in a very early stage to find the best founders to invest in. Other startup founders get the opportunity to build a high-quality business network. For other firms accelerators create new customers in the form of the startups they support (Miller & Bound 2011: 11-12). From the political perspective the government decides whether to promote accelerator programs or not and sets the frame for the accelerators presence in ecosystems. Therefore the enforcement of the accelerators activities is dependent on the government of respective countries. Thus a wider establishment of accelerators can help to lower bureaucratic hurdles what, from the societal perspective, has a positive effect on the regional founder culture by encouraging people to bring in their own ideas to the market. In this way

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accelerators support the regional innovativeness and economy (Miller & Bound 2011: 12).

### *1.2 Research Relevance and Research Question*

In the field of research of the phenomenon a clear understanding of what role accelerators play in the ecosystem is missing. The values of a culture are reflected and strengthened by social institutions, industry characteristics and behavior as well as the individual ways of thinking and behavior are influenced by them (Collins 2004: 8; Bruton 2010: 433). Due to the fact that researchers have observed that the relationships between these elements are endogenous and complex (Herbig et al. 1994: 25-27; Davidsson et al. 1995) further research in the field is important to discover accelerators role as institutional change agents. Finally, an enhancement of the knowledge about the dynamics between the accelerators and the ecosystem as their institutional framework can help to better understand how accelerators can engage in institutional change processes. According to previous explanations the following paper wants to focus on the question: How can accelerators influence institutional framework in ecosystems as change agents? The aim of the present paper is to highlight the contributions of the research and to examine a research approach which can be addressed in future research to fill the gaps.

### *1.3 Approach of Analysis and Structure*

To achieve objectivity and to analyze the research question of the thesis it is important to examine the approach of analysis. In particular the analysis contains the two main issues of institutional theory and accelerators in entrepreneurial ecosystems.

In the first step of the approach inclusion and exclusion criteria were defined. These criteria refer e.g. to the year of publication, language and the type of databases and journals. In case of the year of publication only articles which were published between 1987 and 2017 were considered for the institutional theory due to the starting point of the development of the theory. For the analysis of the literature regarding accelerators publications since 2005 were selected based on the founding of the first accelerator. Articles which were electronically or by other reasonable means unavailable have been excluded. Furthermore the focus lies on English written articles because the majority of relevant articles in the field provided by the databases are written in English. In addition articles from the national and university library Bremen, EBSCO and Google Scholar were included to

ensure to find the most important and high-quality articles.

In the second step of the approach articles which deal with new institutionalism, entrepreneurship, accelerator, institutional change agent and entrepreneurial ecosystem were selected considering the defined criteria. Summing up, the inclusion and exclusion criteria as delimitation of analysis are essential to make sure that only the relevant aspects to respond to the research question are included.

To discover accelerators role in ecosystems the thesis starts with the consideration of the conceptual background including the situation analysis of the phenomenon accelerators in ecosystem and literature analysis of institutional theory. By taking previous research contributions into account preliminary assumptions are to be defined in the third chapter. Furthermore, it is achievable to derive a method which is suitable for further research in the field to fill research gaps concerning accelerators role in ecosystems. Therefore some advice regarding the research approach, data selection and data collection is recommended. In the end a summary of the findings will be presented.

## **2 Conceptual Backgrounds**

### *2.1 Situation Analysis of the Phenomenon Accelerators in Ecosystem*

In the first step to answer the research question it is necessary to define the term entrepreneurial ecosystem. It has to be mentioned that in the area of entrepreneurship more and more research on this approach is conducting (Bischoff et al. 2017: 2). The subject of entrepreneurial ecosystem frequently refers to startups (Stam 2015: 2). Previous research shows that there is no consistent definition of this expression so far. However the current explanations usually have one thing in common. Like the definitions of Stam (2015) and Mason and Brown (2014) most authors focus on the interdependence of entrepreneurial actors which stimulate the entrepreneurial ecosystem performance (Brown & Mason 2017: 4; Mason & Brown 2014: 5; Stam 2015: 5). For this paper an entrepreneurial ecosystem is described as “a set of interconnected entrepreneurial actors [...], entrepreneurial organizations [...], institutions [...] and entrepreneurial processes [...] which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment” (Mason & Brown 2014: 5).

All over the world an increase in ecosystems and the foundation of successful startups could be registered. But the functionality and development of startup ecosystems and the way they create profitable startups still has to be found out. Since 2011 the Startup Genome report deals with these topics and includes the “Global Startup Ecosystem Ranking” (see app. 1). It is based on the idea to show the promising ecosystems for startups. In 2017 the top 20 startup ecosystems are based in North America, Europe and Asia. Silicon Valley is in the first place of the top 3 startup ecosystems, followed by New York and London. Compared to the ranking in 2015 substantial changes occurred (see app. 2). Three new cities now rank in the top 20 of startup ecosystems, among them Beijing (position 4) and Shanghai (position 8) from China as well as Stockholm (position 14). Moreover London, Berlin, Vancouver and Toronto are ranked on higher positions than in 2015 (Startup Genome LLC 2017: 3-4, 7, 28-32).

One of the actors in entrepreneurial ecosystem is called accelerator, which can also be termed as a provider of entrepreneurial resource (Brown & Mason 2017: 9). In the following it is essential to define accelerators and differentiate them from other organizations that support startups too like incubators and angel investors (see app. 3) (Cohen 2013: 19). It has to be mentioned that a homogeneous definition of accelerators is missing. Generally an accelerator stands for a program which is characterized by the support of persons who want to set up a business regarding the launch of their products, ideas or technologies and the foundation of a workable venture (Dempwolf et al. 2014: 6-7).

With a deeper look considering the dissociation from other programs an accelerator is described as “a fixed-term, cohort-based program, including mentorship and educational components, that culminates in a public pitch event or demo-day” (Cohen & Hochberg 2014: 4). The restricted period of time mainly indicates an accelerator. Normally an accelerator program takes three months. In contrast incubators perform one to five years whereas angel investors are characterized by an ongoing duration. Another central feature of accelerators which is not given by incubators and angel investors is that they are cohort-based programs. That means the program is joined and left by the companies as a group. Thereby a strong connection among these participants could be developed. Moreover accelerator programs stand for education and intense mentorship. The education area is composed of diversified seminars in the field of entrepreneurship. With regard to

mentorship there are for instance programs planning sessions for one month with the attendance of 75 mentors (Cohen & Hochberg 2014: 4, 9-12). On the other hand in case of incubators the founders have to pay a charge for mentorship given by service providers. At the end of the accelerator program the founders get the opportunity, in the context of a “demo-day”, to pitch their ideas to several investors (Cohen 2013: 19, 22-23). Because of the fixed-term character of accelerator programs it is easier for accelerators in contrast to angel investors to organize such a “demo-day” with a large number of regional, local and other investors (Cohen & Hochberg 2014: 13).

With regard to the business model there are profit and non-profit programs (Cohen & Hochberg 2014: 4). Accelerator programs are financed by different players like public actors, investors or cooperation (Clarysse et al. 2015: 6). A large number of privately owned accelerator programs could be registered which receive an equity stake in the participating startups. However in the last few years publicly funded accelerator programs appeared increasingly (Cohen & Hochberg 2014: 11). It is noticeable that the accelerator model is acquired by many local governments with the goal to change the local economies (Fehder & Hochberg 2014: 2). Another latest movement is that accelerator programs turn away from a generalist approach of their early years and specialize themselves to promote startups from selected industries (Cohen & Hochberg 2014: 2).

With a view to the history, the first accelerator was founded in Cambridge in 2005 and is called Y Combinator, based in Silicon Valley (Cohen & Hochberg 2014: 2). Throughout the world it is one of the leading programs (Hathaway 2016b: 4). Among the former participants are well-established companies such as Dropbox or Airbnb (Miller & Bound 2011: 14). With the founding year of Y Combinator in mind, accelerator programs are considered as a new phenomenon (Fehder & Hochberg 2014: 8). Since that time accelerator programs emerged worldwide and became well-known giving assistance to early-stage companies (Clarysse et al. 2015: 6). Especially between 2008 and 2014 a significant increase of the American accelerators could be registered (see app. 4). The number rose by an average of 50 percent annually. Finally in 2015, 172 American accelerators existed (Hathaway 2016b: 4-6). They came into existence due to the lack of incubation models (Pauwels et al. 2016: 23).

Summing up an accelerator program is an interesting, worth investigating actor especially for startups due to several reasons. First the limited duration of the programs enables the founders to gain knowledge quickly in a short time instead of learning without an accelerator, which takes years (Hathaway 2016b: 6). Main reasons why the companies decide to take part in the programs are the offered education and mentorship. Through the above mentioned meetings with various mentors the founders can connect with them and develop their social network, which is very important for the participants. This network is also strengthening by the cohort-based character of the programs (Cohen 2013: 22-23). Finally an accelerator is a program that can contract the company's journey towards faster failure or development (Pauwels et al. 2016: 23). Furthermore accelerator programs offer advantages for venture capital investors. The accelerator programs choose the applicants with the best future perspective and bring them together at one place. As a consequence the capital investors save searching expenses. In addition, the capital investors get the chance to listen to many founders during the public pitch (Fehder & Hochberg 2014: 7).

In spite of the fact that today accelerator programs enjoy great popularity the extensive research of this phenomenon and knowledge about e.g. the effectiveness, various accelerator approaches and types are missing (Cohen & Hochberg 2014: 15; Fehder & Hochberg 2014: 2; Clarysse et al. 2015: 6). Additionally the value of accelerator programs to the regional entrepreneurship ecosystems is unclear (Cohen & Hochberg 2014: 1). Concerning this research gap a few resources confirm a positive impact of accelerators on a startup ecosystem. For example the increasing success of Vancouver that is ranked on position 15 in the global startup ecosystem ranking could be traced back among others to accelerator cooperation. Another example refers to Atlanta. In this case accelerators are one of some actors that support the local tech scene, which developed significantly in the past (Startup Genome LLC 2017: 68, 81).

These examples highlight the need for further research and lead to the research question how accelerators can influence institutional frameworks in entrepreneurial ecosystems. To get a better insight into the dynamics between accelerators and their ecosystems institutional theory will be explained in the following.

## 2.2. Literature Analysis of Institutional Theory

In order to examine the relationship between accelerators and their ecosystem, institutionalism seems to be meaningful as a basis for consideration. For this reason the theory is to be explained in general, so that a basic understanding exists and in the further course the effects of accelerator as institutions, respectively as change agents, can be displayed.

Fundamental the institutional theory deals with how various groups better secure their positions and legitimacy by conforming to the rules and norms of the existing institutional environment (Bruton et al. 2010: 422; Meyer & Rowan 1977: 340; DiMaggio & Powell 1983: 150). The basic parallelism in different institutional theoretical claims is that the institutional environment has an extensive influence on the development of formal structure in different institutions (Amenta & Ramsey 2010: 1). Hence institutional arguments do not rely on aggregations of individual action or on patterned interaction games between individuals, but on "institutions that structure action" (Clemens & Cook 1999: 442). Fundamentally institutions are characterized as social structures which have a high degree of resilience (Scott 1995: 33) and have initiated themselves in such a way in the social environment that it would be connected to high costs to circumvent them (Lawrence et al. 2002: 282). In consideration of this fact, institutions must be taken into account as permanent and legitimate. Thus they are patterns of social relations and have a regulatory character (Jansen 2000: 2), whereby they provide stability by defining how resources are to be distributed under certain circumstances (Haller 2002: 8). Various types of carriers transmit institutions including symbolic systems, relational systems and routines (Scott 1995: 33; Scott 2001: 48). The mode of operation of the institutions ranges from different levels of jurisdiction, from world system to localized interpersonal relationships. As an example for institutions the state or universities can be listed.

According to the literature, the concept of institutionalism has evolved from the resourced-based view. Indeed institutionalism does not displace the resourced-based view, but rather a further development of the theory has to be recognized (Oliver 1997: 698). Consequently institutionalism uses the resource-based view as a basis but must be viewed as a separate theory. Initially institutionalism included only tangible assets like material resources, technical demand or money, which influence the action of institutions. This view has been changed over time, so that the

new institutionalism considers both tangible and intangible assets, e.g. know-how, education, politics or culture. Applied to the research object this means that an increase in influential variables in the respective framework affects the conditions of accelerators' operation in ecosystems. Accordingly there is an approximation between economics and social science which reveals the interactions of both subject areas (Powell & DiMaggio: 1991: 2). The new institutionalism can be subdivided into three main pillars (Scott 1995; 2005; 2008), the regulative, normative and cognitive dimension, which together with associated activities and resources, provide stability and meaning to social life (Scott 1995: 33; Scott 2001: 48).

The regulative pillar is largely derived from the economy based on sanctions and conformity (Bruton et al. 2010: 422; Trevino et al. 2008: 120; Scott 1995: 33). Therefore it includes laws, regulations and government policies. Consequently this dimension deals with the legal system. In addition it can be assumed that the involved actors must behave according to the prescribed rules. The driving force of the regulative dimension is fear and coercion (Palthe 2014: 61).

The second dimension is described as normative and represents models of organizational behaviour, based on obligatory dimensions e.g. social, professional and organizational interaction (Bruton et al. 2010: 422; Trevino et al. 2008: 120; Scott 1995: 33). Considering this background it becomes clear that the normative dimension is dealing with the moral and ethical system of society. In this context influencing factors are e.g. work roles, habits and norms. This shows that the normative aspects should be followed by institutions but are by no means mandatory. Therefore duty and responsibility is the driving force (Palthe 2014: 61).

The cognitive dimension is presented by models of individual behaviour, based on subjective and constructed rules and points the limits of societal behaviour (Bruton et al. 2010: 422; Trevino et al. 2008: 120; Scott 1995: 33). Central elements of this dimension include values, beliefs and assumptions. For this reason the cognitive pillar must be viewed as voluntary; due to this the fulfilment should be regarded as desirable (Palthe 2014: 61). The actions of the participants are characterized by social identity and personal desire. Finally it suggests that these dimensions act together in mutually reinforcing ways to contribute to the institutional context.

Figure 1 illustrates the conceptual model of the influence of regulative, normative and cognitive elements on institutional change and aims to show the important elements of their interdependence (Palthe 2014: 60). The figure portrays the influence of institutional dimensions on the human system context. Moreover it suggests that the resulting dissatisfaction with existing methods and system is affected by the existing change capacity and change resistance. Primarily the figure achieves to illustrate that a capacity to change influences the extent to which change will occur, driven by high levels of dissatisfaction and dissipation. Therefore, a high degree of openness towards change is essential for a successful change processes (Palthe 2014: 61). The greater the change resistance, the less will be the effect that the level of dissatisfaction will have on institutional change. The graphic must be regarded as a cycle so it becomes clear that the institutional change is caused by the different institutional pillars or elements. As a result there is a constant change process which among other mentioned variables is moderated by the dynamics of the three pillars of institutionalism.

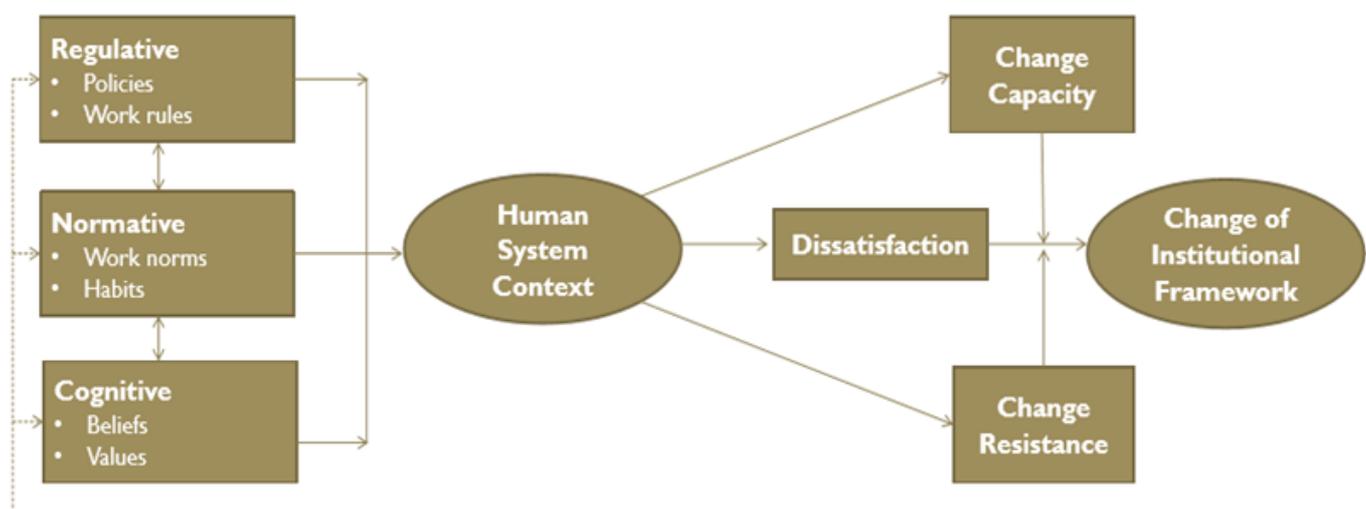


Fig. 1: Conceptual model of the influence of regulative, normative and cognitive elements on institutional change (Source: Own representation based on Palthe 2014: 16)

To sum up, in the concept on institutionalism institutional change agents are able to change the institutional framework. In essence the institutional change is a dynamic and interactive process that occurs over time with actors both being shape by and shaping the institutional framework (Chung & Luo 2008: 122). On the basis of this fact further studies can be carried out to investigate how accelerators can be institutional change agents as a driver in an ecosystem.

### 3 Preliminary Assumptions

In order to gain a first basic understanding of the way in which accelerators can be seen as institutional change agents, a clear definition of the term institutional change agents must be given in order to discuss the interaction of the accelerator as an institutional change agent with their ecosystem. With reference to the relevant literature, a basic understanding of the conceptual nature of the institutional change in the interrelationship of the acting agents is going to be presented. The institutional change is characterized as a dynamic and interactive process (Wang & Gooderham 2014: 6) of actions and institutions, both as a structural and a cultural dimension (Dolfsama & Verburg 2005: 1). This process occurs in the course of time with actors who have been shaped by their institutional environment, but in the contrary have shaped it as well (Chung & Luo 2008: 125). The change includes formal rules, as well as informal constraints, norms and standards like patterns of behaviour or beliefs (Sjöstrand 1993: 38). The obstacles to institutional change are mainly the coordination, search and learning costs. The challenge of each individual is to change their existing identity in this way, to remove existing norms and to create new ones. Therefore an institutional change agent has to assume a reputable function and has to have a certain degree of legitimacy in order to convince (Riddle & Brinkerhoff 2001: 673). For this reason, institutional entrepreneurship is increasingly equated with institutional change. In this context, an entrepreneur is often referred to be an initiator of the institutional change (Khavul et al. 2012: 32). In addition to those definitions, the question arises of how accelerators can act as institutional change agents. Especially in countries and territories where professional and commercial standards are not sufficiently established, where non-governmental organizations play a more subordinate role, the civil society is not always well developed and access to capital is more difficult, particularly in

this regard institutional entrepreneurs equated with accelerators are playing an increasingly important role of development (Khavul et al. 2012: 31). As a result, accelerators as change agents stimulate thereby that they mobilize resources to new institutions which are considered to be conducive to them. They establish new institutions and not only change existing institutional environments but also create new ones that are recognized and promoted for their business (Pacheco et al. 2010: 914).

As already mentioned, regulative, normative and cognitive systems are seen as important elements of institutional change. These elements work together in a mutually reinforcing way with regard to contribute to the institutional context (Palthe 2014: 61). Therefore, in order to promote the process of institutional change, it is important to impede and overcome the institutional framework in those three dimensions in order to ultimately implement new practices. Often the incentive is there, but some accelerators are missing the force to change institutions or establish new ones (Maguire et al. 2007: 10).

However, after researching the following assumptions, it becomes evident that accelerators as institutional change agents could exert a clear influence on the institutional framework. Regarding to the regulatory dimension, it would be possible for accelerators to stimulate political and governmental institutions as well as to reduce bureaucratic hurdles and to strengthen the enhancement of support. Concerning the normative dimension it could bring the accelerator to a higher level of illustriousness and respectability in society and also establish accelerators as a common way to help startups grow which could lead to an enhancement of the regional founder culture. Furthermore, on the individual level, this change and the spread of startups and accelerators could affect the acceptance or the risk of founding which could guide towards the decision to bring own businesses to the market and to become a part of the startup culture.

In conclusion it can be said that, with regard to the already mentioned explanations, one accelerator could start to establish new institutions and lead to higher innovativeness and economic growth of the chosen area. The interaction of the accelerators is determined by the individual institutional framework by, for instance, competition regulations (Khavul et al. 2012: 32), the founder-culture and the amount of startups and accelerators. In what way and to what extent accelerators as change agents could have an influence on the

respective ecosystem could be examined in the future using the following methodology.

## 4 Methodology

### 4.1 Research Approach

Previous research contributions help to get a better insight into the topic but offer less information to answer our research question whether and how accelerators engage in institutional change processes in ecosystems. Therefore a concrete analysing plan may help future analysts to get a better insight into the role of accelerators to conceptualize the relationships and the interdependencies to their ecosystems.

Facing the complexity and lack information on the topic, a grounded theory (Strauss 1967) approach by engaging in a qualitative research process can help. It will conceptualize single connections to build some theory during the data selection and data collection process. Rather than quantitative research methods, a qualitative research design helps researchers to remain flexible and open during the process of analyses (Neuman 2014: 177). Following an inductive approach concept and selecting criteria are developed and defined over time when researchers are trying to generalize single information to build up some theory answering the underlying question (Neuman 2014: 204).

### 4.2 Data Selection

According to grounded theory's stepwise conceptualization process "of developing clear, rigorous, systematic conceptual definitions for abstract ideas/concepts" (Neuman 2014: 205), there is no clear data selecting plan in the beginning. Thus future researchers in the field must do some single investigations to get a better insight into the relationships and dynamics so that criteria can be concretized. Such an ongoing process of evaluating and determining new data is called theoretical sampling (Coyne 1997: 625-626; Neuman 2014: 204-205). A sample is defined as "a small set of cases a researcher selects from a large pool and generalizes to the population" (Neuman 2014: 246). Aim is to build up a sample out of which selected cases can be used in a "process of constant comparison" (Schwandt 2001: 110) in which researchers try to identify similarities and differences to evolve a theoretical construct concerning the selected issue (Schwandt 2001: 110-111). In social research such concept of "triangulation", as an observation from various

perspectives, is seen as needed to generalize reliable concepts concerning a specific object (Neuman 2014: 166). Over time the analysts get a better feeling, where they have to go and which questions they have to ask to get the basis of information they need to evolve a theory.

Especially the complex dynamics and relationships in the underlying research question offer many potential areas and actors to observe. Moreover the uniqueness of the accelerators and the institutional frameworks, they take place in, determine the change processes, what leads to an even broader pool of data selecting criteria to start from. Thus, to get the best insight a closer look at various areas and actors, both having differences and similarities has to be taken. According to this, countries with differences concerning the amount of accelerators, economic, culture and political situation and actors with entrepreneurial background like participants and managers of accelerators, but also those with governmental background like politicians and support organizations should be considered. This way, researchers make sure to take different insights into account and create some reliable concept in the topic.

As stated in the assumptions it is supposed that the present amount of accelerators and the inflexibility of one area's structure have much influence on the accelerators power to act as institutional change agents. Thus those differences and similarities should be given a lot attention to see if there is any correlation. Therefore to discover any correlation between existing amount of accelerators and their role as an institutional change agent it might be helpful to divide observed ecosystems into categories according to the structure of their institutional framework and the present establishment of accelerator programs.

Based on chapter 2.1 ecosystems to fill those categories can be: 1. silicon valley, which is ranked as the best ecosystem worldwide and has the longest history of accelerator programs, 2. Berlin, because since 2015 it has climbed up in the ranking and furthermore registered an increase of accelerator programs like Axel Springer Plug and Play Accelerator and 3. Shanghai, that is listed among the 20 best ecosystems and build up a strong startup ecosystem in contrast to 2015.

### 4.3 Data Collection

With regards to the previous explanations, due to the data collecting process it should be possible to create comparable information but also take the

uniqueness of the several “target populations” (Bernard 2013: 216) into account. To do so three main pillars of data collection can be identified.

Semi-structured interviews can be considered as a good possibility to get into an open conversation. In this context researchers should make use of an interview guide. This way they make sure to “control the input that triggers peoples responses so that their output can be reliably compared”, what is used to be the main benefit of structured interviews, (Bernard 2013: 216) but also remain flexible to react to individual answers. Moreover interviews should be conducted separately and not in groups in order to get isolated opinions and to avoid influence processes. Because the research question is focusing on developing processes, observation by getting involved into an accelerator for a specific period of time can be taken into account. Thus researchers get useful information by first-person experiences of the processes and dynamics. Nevertheless secondary data is essential and should be used in an ongoing process to get information of interviewees, accelerators and countries. Therefore the internet, but also written literature and company documents can be useful sources of information to conduct in conceptualization process.

According to triangulation theory future research must be representative in numbers to generate reliable findings. Nevertheless it cannot be told what exact amount regarding the number of ecosystems is needed to meet this demand. After all it is in the nature of theoretical sampling, that it terminates when saturation in the matter of needed data basis is reached in the fact that collected data confirms previous findings but does not lead to new ones (Strübing 2003: 155).

## 5 Conclusion

Due to the complexity and novelty accelerators and their role as change agents in ecosystems are still unexplored fields in entrepreneurial research. Therefore the thesis wants to guide and pave the way for further researches by examining previous contributions and after that elaborating a research approach can be followed in the future.

Since the establishment of the Y Combinator in 2005 accelerators play an increasing role in the USA and beyond. Due to their main features like the limited span of time, the intensive mentoring and the organization of a so called “demo-day” the accelerator model has positive effects for founders, investors and local innovativeness and thus is able to enhance the regional economy. The success of former participants like Airbnb and Dropbox and

latest Genome’s Startup Ecosystem Rankings legitimate accelerators as an important actor in ecosystems.

Considering the small basis of findings in the field, institutional theory seems to be meaningful to display accelerators role in ecosystems. Looking at the new institutionalism accelerators can be defined as institutional change agents. In this context Figure 1 displays the process of institutional change as a result of the interdependencies between the level of dissatisfaction and the human system context, which is affected by the three pillars of institutionalism, containing the regulative, the normative and the cognitive pillar. According to this, the three dimensions have a direct impact on institutional change processes. As a result accelerators engage in institutional change by influencing their institutional framework on the three pillars of institutionalism. Nevertheless it cannot be ignored that despite their impact, the influence of accelerators is, among other complexities, still determined by the individual institutional framework and its capacity and resistance to change.

Even though previous research can be seen as a fundamental basis to get a better insight into the dynamics between accelerators and their ecosystems, further research needs to be done. In this context a qualitative research approach is recommended to appreciate the complexity in terms of the relationships and dynamics between the individual actors. With regard to the theoretical sampling there is no

clear defined data selection plan at the beginning, so that researchers must concretize the selection criteria over time in an ongoing process of evaluating collected data sets. Referred to further explanations especially differences and similarities according to present establishment of accelerators and their institutional framework have to be taken into account, so that research should pay attention to ecosystems that differ in those aspects to generalize some reliable findings. In terms of data collecting, interviews, observations but also the ongoing consideration of secondary data can be identified as the main methods to complete the data sets. Still it has to be mentioned that before starting further research the recommended methodology has to be updated in correspondence of the existing level of research.

Contrasting the presented findings it can be assumed that the phenomenon of accelerator as a part of startup ecosystems is just in the beginning and that despite their rapid growth a lot more is

imminent. Therefore a better understanding to what extent and through which actions accelerators as agents of institutional change can affect the respective ecosystem can help founders, investors, politics but also other sectors to use accelerators in a purposeful manner to intensify its positive effects.

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