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Understanding the entrepreneurial decision-making behind the choice to join a start-up accelerator

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Abstract

Title: Understanding the entrepreneurial decision-making behind the choice to join a start-up accelerator

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Keywords: Startups, Startup accelerator, incubation models, entrepreneurship, entrepreneurial decision-making

Problem: Startup accelerators have become an increasingly important part of entrepreneurial ecosystems since the first accelerator, Y Combinator, was established in 2005 (Hochberg, 2016). Ever since, their popularity has increased, with more than 3000 programs existing as of 2016 (Hausberg & Korreck, 2020), leading to significant investments into startups, which positively impacts economies around the globe. Despite their significance, research on startup accelerators is still rare and even today, some entrepreneurs still do not have a clear understanding around the concept of these programs. Research has particularly investigated the ability of accelerators to efficiently accelerate startups. However, until today, we do not yet understand the thought process behind entrepreneurs' choice to take part in such a time- and (sometimes) financially consuming support program.

Purpose: This study aimed to close exactly this gap by investigating the decision-making of entrepreneurs who chose to join an accelerator program during the development phase of their startup. Particularly, the main influencing factors in their decision-making during this time are aimed to be explored and described.

Methodology: An inductive, qualitative approach was chosen for this study, in order to gain an in-depth understanding of the entrepreneurs' perspectives during this decision-making process. Semi-structured interviews were held with 18 globally scattered accelerator graduates. The accelerator programs from which the entrepreneurs were recruited were chosen based on a set of criteria for the definition of a startup accelerator. The interview data was analysed using the Gioia method.

Conclusions: Three main influencing factors were identified as central dimensions of the grounded theory model of influencing factors affecting entrepreneurial decision-making in this context. First, prior personal and business-related experiences appeared to be influencing different motives for joining the program and shaped the founders' expectations of these programs. Second, the entrepreneur's perception of external circumstances was also found to affect their decision-making. The final influencing factor was found in the approach and mindset that the entrepreneur had during the decision-making process. Dynamic relations between the three factors were proposed as well as a typology which distills three different types of entrepreneurs who chose to join accelerators, based on the data collected within this study.

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1. Introduction

1.1. Situation and complication

In the field of entrepreneurship, the topic of programs that support new venture development has recently gained popularity, especially during the past 15 years, where more and more programs such as accelerators and incubators have been founded (Hochberg, 2016), leading to an increased interest in this research area (Mian et al., 2016). A number of different definitions exist for the concept of startup accelerators in literature, leading to a general confusion about this type of program in research as well as in practice. This study makes use of a general definition of startup accelerators, which defines them as follows: "Accelerator programs, which are also referred to as seed accelerators, startup accelerators or business accelerators, are limited-duration programs, lasting roughly three to six months, that help cohorts of startup ventures with their entrepreneurial processes and aspirations" (Cohen et al., 2019, p.1781).

Accelerators have become an intermediate linkage between start-ups and the resources extant in their entrepreneurial ecosystem (Cohen et al., 2019). Within this intermediary role, accelerator programs might have varying influences on new ventures and differing roles in the entrepreneurial ecosystem depending on the way they are designed (Pauwels et al., 2016; Cohen et al., 2019). Diversity in accelerator designs can stem from factors such as the services offered in the program, the focus and selection process for the participating teams, the provision and structure of funding, and the industry focus (Pauwels et al., 2016).

A more familiar concept of such a startup support service can be found in incubators, which are defined as "[..] business-incubating organizations that support the establishment and growth of new businesses with tangible (e.g. space, shared equipment and administrative services) and intangible (e.g. knowledge, network access) resources during a flexible period and are funded by a sponsor (e.g. government or corporation) and/or fund themselves taking rent (or less frequently equity) from incubatees." (Hausberg & Korreck, 2020, p. 163). In contrast to incubators, accelerator programs usually focus on ventures that are further along in their development process and are past the point of needing to acquire basic physical resources, e.g. office equipment (Isabelle, 2013).

With the emergence of accelerators as an evolution of business incubators (Pauwels et al., 2016), more research on startup accelerators needs to be conducted in this area due to several reasons. For one, the differences between these two business support services imply a discrepancy between findings of the already developed research on incubators and the actual role of accelerators in new venture creation (Hackett & Dilts, 2004; Hallen et al., 2020; Peters et al., 2004). In fact, the existing literature within the field of accelerators presents discrepancies within their findings, due to the aforementioned heterogeneity of the program designs (Cohen et al., 2019). Thus, digging deeper into the field of

accelerators and investigating it through new approaches is necessary in order to develop a deeper understanding of this type of startup support mechanism, especially in view of their increasing omnipresence on a global level (Hochberg, 2016).

Accelerator programs have until now been studied mostly through similar perspectives, for example by investigating the startups' performance after participating in the program (Hallen et al., 2014, 2020). So far, little is known about the phenomenon from the entrepreneurs' perspective, specifically what leads some entrepreneurs to choose accelerators as a way to support them during the process of developing their venture and what this decision-making process looks like from their point of view. Gaining more insights into the process of coming to this choice will shed light on a previously unexplored part of entrepreneurial decision-making research. As accelerators can be viewed from several theoretical perspectives, such as entrepreneurial decision-making theory, this study aims to add new and valuable context to the theory.

Not only academically, but also in an economic and practical sense, closing this knowledge gap could lead to crucial knowledge for several players that exist in entrepreneurial ecosystems, for example founders of accelerators, venture capitalists and policymakers. Furthermore, since the first startup accelerator was created in 2005, by 2016 already more than 3000 startup accelerators worldwide were established (Hausberg & Korreck, 2020; Hochberg, 2016). Moreover, up until July 2021, the number of investments by accelerators into startups in the United States amounts to almost 20,000[1]. Given the significance of startup accelerators economically as well as in the entrepreneurial ecosystem, closing this research gap is of high importance as there seems to be a clear demand for more accelerator programs, due to their increasing number. But due to the lack of research on accelerators, we do not yet know what exactly drives some entrepreneurs to choose this kind of time-intensive (and sometimes costly) support mechanism. Therefore the question arises: What are the factors that lead some entrepreneurs to choose accelerators? In order to understand this, an in-depth study of the influencing factors of this decision is needed. Therefore, a closer look needs to be taken to provide a deeper understanding of this aspect of the phenomenon. For this purpose, a new approach to study this topic will be taken with this study, to reveal the decision-making behind entrepreneurs' choice to use accelerators.

1.2. Research objective and central research question

The aim of this study is to further dive into the rather novel and under-researched topic of startup accelerators and facilitate an understanding of the phenomenon from the perspective of the

[1] Statista. (2021, November 24). *Leading U.S. startup accelerators by investments as of July 2021*. Retrieved December 18, 2021, from https://www.statista.com/statistics/1249900/leading-startup-accelerators-investments-usa/

entrepreneurs deciding whether to make use of this support program. Previous studies dealing with start-up accelerators have investigated the topic from rather comparable perspectives, looking especially at the outcome of participating in accelerators and trying to measure the resulting success and impact. This leaves behind a knowledge gap when it comes to understanding the phenomenon from the viewpoint of entrepreneurs that choose to join the programs and their decision-making. Entrepreneurial decision-making theory has not yet considered this phenomenon and in the past, as studies thematizing entrepreneurial decision-making have focused more on decisions that can be attributed to one specific entrepreneurial activity (which is not the directly case for accelerator programs) or investigated entrepreneurial decisions using generally established decision-making concepts such as individual's risk assessment and biases (Shepherd et al., 2015). Taken together, the economic and entrepreneurial significance of accelerator programs, as well as these research gaps, lead to this study to revolve around the question ***„What factors influence the entrepreneurial decision-making regarding the choice to join an accelerator during the venture development phase?"*.** The aim of this study is to explore the key factors that influence the decision making of the choice to enter an accelerator program and to describe them in a way that helps to illustrate each factor's role during this decision.

As it is often useful to limit the scope of a research study, this investigation will make use of a certain list of criteria for the types of programs that can be considered coherent with definitions of accelerator programs and thereby be included in this study. The selection of these programs will be explained later on in section 3.2. Otherwise, no limitations in terms of the type of accelerators (location, industry, etc.) were established for this study, in order to leave room for the inclusion of different perspectives stemming from entrepreneurs who graduated from different accelerators around the world. Also, there is no evidence of significant differences between accelerator programs around the world, with many of the more established and well-known accelerator programs even running their programs on a globally distributed level (such as Founder Institute and Startupbootcamp). Therefore, any entrepreneurs who considered joining one of the accelerators in line with the selection criteria in section 3.2. were included in this study.

1.3. Theoretical and practical relevance

1.3.1. Theoretical relevance

The proposed study aims to contribute to the fields of entrepreneurial decision-making as well as start-up accelerator research in a significant way. With the rise of accelerator programs and the broad

field of entrepreneurship research (Shane & Stuart, 2002; Singh, 2001), special focus is required in particular for fragmented areas such as entrepreneurial decision-making research.

Research on the topic of accelerators has been relatively scarce in terms of variety in contexts and approaches. Incubators and accelerators have both been studied especially in contexts such as their effect on the participating businesses' subsequent performance or the characteristics of ventures that are accepted into these programs (Hallen et al., 2020; Peters et al., 2004). For example, Cohen et al. (2019) looked at a number of studies that investigated the ability of accelerators to enhance venture performance and found that the results of these studies are often contradictory, depending on the attributes of both the participants and the programs. Therefore, it has become apparent that further research is not only needed in the area of accelerator program designs and the resulting effects on firm performance but also because shifting the focus on the participating entrepreneurs could significantly add to the understanding in this field and reduce research gaps. Although some studies have examined this area from the perspective of the participants, i.e. by looking at the factors that entrepreneurs should consider before entering such a program (i.e. (Isabelle, 2013), academics still do not yet know much about how entrepreneurs, who are operating in situations of high uncertainty, make the decision to join an accelerator program in order to support their venture development instead of i.e. relying on other means or primarily on themselves and their resources. There have not been enough studies that investigated this phenomenon from the perspective of the process that the entrepreneur himself goes through before coming to this decision, i.e. which factors affect the decision process and in how far they do so. This fuels the need for a specified research study using an in-depth approach that provides a deeper awareness and knowledge about this phenomenon.

1.3.2. Practical relevance

By commencing with this research a formerly unexplored context of decision-making will be examined, which is not only valuable to the theory in this field but also to other players in the entrepreneurial ecosystem such as accelerator managers, venture capitalists and policymakers. Despite the fact that the number of existing accelerator programs has been growing for years (Hochberg, 2016) and with it their prominence in entrepreneurial ecosystems and research, stakeholders remain to find unexplored aspects of the phenomenon (Hallen et al., 2020). The proposed study aims to decrease the confusion around the concept of accelerator programs and contribute to the distinguishment between them and incubators, as well as contribute to the understanding behind entrepreneurs' choice for accelerators, not only for academics in the field, but also for different actors like aspiring entrepreneurs, providers or managers of accelerator programs, and policymakers.

For example, founders or managers of accelerators can benefit from these insights for the adaption of their programs in terms of design and offered services included in the program. Understanding how entrepreneurs come to the decision to join and what this process looks like can also imply specific

marketing strategies for the accelerator programs and help to prioritize which information about the program should be highlighted, in order to align with the factors that seem to influence the participation decisions of the entrepreneurs and attract the right talents. Policymakers monitor the entrepreneurial activity and often invest in the creation of entrepreneurial support programs such as incubators and accelerators (e.g. Imagine2030 Accelerator in Berlin[2]). Gaining an understanding of the entrepreneurs' perspective before deciding to join an accelerator would therefore benefit them in their planning of further investments into the creation of accelerator programs, especially now as their proliferation is increasing globally.

2. Theoretical Background

The design of this research project is of inductive nature, as the goal is to discover new insights about the underlying aspects that affect entrepreneurs in a specified decision making context. While the research design and method will be discussed in *Section 3*, this is important to note at this point, as it is the reason for the theoretical background of this research study neither fixating on one specific theory nor using a constructed theoretical framework as a basis. This more confined approach to covering extant theory or literature on the topic of research is also in line with the suggestion of Gioia et al. (2013) for the write-up of theoretical sections of academic papers that make use of the Gioia method (which will also be discussed in *Section 3*). The scholars advise against extensive literature reviews during this type of research study, as these studies are based on grounded theory, which "presumes a level of semi-ignorance or some suspension of belief in the received wisdom of prior work" (Gioia et al., 2013, p. 23). Therefore, in this section, key concepts from the literature that are relevant to the specific context that this study deals with will be reviewed in order to create an understanding of the big picture of this thesis.

2.1. Research on startup accelerators and incubators

In this *section 2.1.*, some background will be provided around the concepts of incubators and accelerators. First, the difference between the two terms will be discussed, due to a common confusion around them that exists in literature and practice. Then, the concepts of incubator programs and accelerators will be discussed, offering definitions and some key information about the programs.

[2] *Imagine2030 Accelerator | Berlin | Germany*. (2021). Imagine2030. Retrieved June 4, 2021, from https://www.imagine2030.eu/

2.1.1. Delineation of the two concepts in literature

When hearing about incubators and accelerators, most often confusion arises, as the difference between the two concepts is not clear to many. This is also the case in entrepreneurship research literature. Business incubation is still a relatively under-researched area, with somewhat more research existing around incubators and even less for accelerators (Mian et al., 2016). A few literature reviews do exist in the field, however, they also emphasize how the existing studies can be categorized into a small number of clusters of research objectives. For example, literature on accelerators has been able to be divided into two main streams; a) characterization of accelerators as a conceptual model and b) empirical evaluations of accelerators impact (Hausberg & Korreck, 2020; Hochberg, 2016).

Although these types of programs have been the topic of some research studies for a few years, the emergence of numerous different types of startup support programs created significant confusion and prevented the development of coherent definitions for these programs (Hausberg & Korreck, 2020). And while the concept of incubators is somewhat more well-known, many are still unsure what exactly accelerators are and how they are different from incubators. Research shows that in the spectrum of incubation models, many different manifestations of such business support programs have appeared, making it more difficult to have a comprehensive definition of i.e. incubator programs (Aernoudt, 2004). Some academics argue that accelerators are a sort of new generation of incubation models (Pauwels et al., 2016). Literature has defined the 'incubation model' as an umbrella term, which includes everything that falls under "[..] an incubation entity [that] provides support to start-ups to improve the probability of survival of the portfolio companies and accelerate their development" (Pauwels et al., 2016, p. 14). Aside from accelerators and business incubators, other forms of incubation models are i.e. innovation science parks and innovation centres (Pauwels et al., 2016).

One study, which included a survey of Canadian incubator and accelerator managers distilled some of the major general differences between incubators and accelerators (Isabelle, 2013), see *Table 1*. Furthermore, the article provides a number of key factors that entrepreneurs should consider when they are trying to decide between entering one of the two programs. Therefore, putting more effort into clarifying the distinction between incubators and accelerators is not only of importance for entrepreneurship research but also in practice, as founders can expect and eventually gain very different results depending on the fit between their startup (and themselves as founders) and the support program that they choose to enter. The characteristics of the individual programs will be touched on in the sections that follow, as well as definitions for the two concepts.

Incubator	Accelerator
For early-stage startups	For next stage, for high-growth firms
Long-term process	Short-term process

Sectors with longer time to market	Sectors with shorter time to market
An institution	A program within an institution
Building sustainable firms	Short-term horizon, cohort-based
More focused on economic development	More focused on growth and ROI
Generally not-for-profit	Generally for-profit
Older establishments	Newer establishments or programs

Table 1: Differences between incubators and accelerators (Isabelle, 2013, p.19)

2.1.2. Incubator programs

A similar business support mechanism to startup accelerators, the focus of this study, can be found in incubators. This type of incubation program has been operating before accelerators were established, and can therefore be seen as the antecedent of accelerators. Different classifications for business incubators have emerged within entrepreneurship research. For example, (Peters et al., 2004) distinguish between non-profit, for-profit and university-affiliated incubators. Similarly, (Pauwels et al., 2016) acknowledge preceding research and differentiate between public and private incubators, as well as corporate and academic (university) incubators.

In a more recent paper, Hausberg and Korreck (2020) reviewed the literature on incubators and took a look at the myriad of definitions and typologies that exist so far. Consequently, they have come up with the following definition for business incubators: "Business Incubators (in the narrower sense) are business-incubating organizations that support the establishment and growth of new businesses with tangible (e.g. space, shared equipment and administrative services) and intangible (e.g. knowledge, network access) resources during a flexible period and are funded by a sponsor (e.g. government or corporation) and/or fund themselves taking rent (or less frequently equity) from incubatees." (Hausberg & Korreck, 2020, p. 163). This definition aims to differentiate incubators from other actors in the ecosystem and clarify their role in the development of new businesses in a precise way.

A large part of research on business support programs has thematized their actual effectiveness in supporting new businesses. This is also the case for incubators, where some academics have questioned their ability to provide value to the incubatees (Peters et al., 2004). It should be kept in mind however, that the evaluation of incubators' impact is highly dependent on the characteristics of the type of incubator in question. Therefore, a general impact assessment and making subsequent generalized judgments can potentially be problematic (Aernoudt, 2004). Looking at this problem from a different perspective, Wiggins and Gibson (2003) investigated (mostly non-profit and university-) awarded incubators and derived a set of criteria for successful business incubators, namely: 1. the

establishment of clear success-metrics, 2. provision of entrepreneurial leadership, 3.establishing and conveying valuable benefits to member companies, 4. establishing a rational process for selecting new startups and 5. ensuring startups' access to the needed financial and human resources (Wiggins & Gibson, 2003).

Aside from incubators' impact on the incubatees, the economic significance of this type of program has also been studied. Despite the disparity in program designs, incubators have been found to facilitate economic development, which was also the driver for the creation of early incubators in Europe, where the aim was to increase regional economic diversification as well as competitiveness through the promotion of tech firms (Aernoudt, 2004). Likewise in the USA, incubators have been proven to be a fundamental driver for emerging high-tech and -growth companies (Choi & Shepherd, 2004). Although the concept of business incubators has been around for a longer period of time than accelerators, it still represents a relatively new phenomenon, with many research gaps, with one of them being a lack of focus on incubatees and the process of their incubation (Hausberg & Korreck, 2020; Isabelle, 2013).

2.1.3. Accelerator programs

As indicated, accelerators have been recognized in the literature as a sort of evolution or response to business incubators and their deficiencies (Pauwels et al., 2016), classifying them under the umbrella term of incubation models (Pauwels et al., 2016) or TBIs (technology-based incubation models) (Mian et al., 2016).

Although acceleration programs, like incubators, might differ in their exact program design, researchers argue that some of the program characteristics make them a more specific target for research than incubators, which can be observed as more of an open concept compared to accelerators (Hallen et al., 2020). One of these attributes is the accelerators' even bigger focus on facilitating learning rather than providing essential (physical) resources, in order for the start-ups to successfully and sustainably develop their businesses (Hallen et al., 2020). Looking at the resources they do provide, accelerators target the facilitation of intangible resources such as knowledge and industry contacts instead of the "broad array of services" that incubators often offer (Isabelle, 2013, p. 20). Furthermore, the circumstances under which participation occurs is defined through a fixed period of time (usually three to six months) as well as of cohorts of founders, who collectively participate and graduate together in one time period (Isabelle, 2013; Cohen et al., 2019). This stands in contrast to incubators, which do not have fixed restrictions for the start or duration of participation (Rothaermel & Thursby, 2005). These characteristics are essential for the differentiation of accelerators from other types of incubation models, and therefore their definition oftentimes included exactly these attributes. This is also the case for the definition provided by Cohen et al. (2019, p.1781), which describes accelerators as "[..] limited-duration programs, lasting roughly three to six months, that help cohorts

of startup ventures with their entrepreneurial processes and aspirations". This journey usually ends with the founders pitching their startups in front of a crowd consisting of potential investors, mentors, corporate executives etc., therefore founders gain access to a number of benefits, which they would have struggled to obtain without the accelerator (Mian et al., 2016).

Similar to incubators, the economic significance of accelerators impacts the participating startups as well as the local economy. While some accelerators make direct investments into the startups, some other programs do not make direct contributions but have a strong focus on facilitating contact and matching between startups in the cohort and potential investors. For instance, as of July 2021, almost 4,000 investments into startups were made by accelerators in Europe alone, the most active one being Startupbootcamp UK[3]. For the United States, the volume amounts to almost 20,000, with the most active accelerator being Y Combinator[4]. These investments imply the significant driver for startups that accelerators represent.

2.3. Entrepreneurial decision-making research

Shepherd et al. (2015) published a largely exhaustive review paper about entrepreneurial decision-making, which is also the first literature review around this research field. The paper categorizes previous literature along the different stages of the entrepreneurial process. This process generally entails the steps of opportunity recognition and assessment, market entry, resource assembly and opportunity exploitation, launch, and exit (Peters et al., 2004; Shepherd et al., 2015). The authors identified existing research articles on decision-making during each of the stages, as well as factors that seem to be affecting the decisions made in the respective context, according to the articles that were included in the review and categorized them into the corresponding context. In addition to categorizing the literature along the lines of the entrepreneurial process, Shepherd et al. (2015) also included studies that fall into the categories of heuristics and biases in the decision-making process, characteristics of the decision-maker and the environment as the decision-making context.

The exact stage of a venture might differ when looking at different business support services, due to the aforementioned disparities between i.e. startup incubators and accelerators, as well as in between accelerator programs (Hallen et al., 2020). For this study, a categorization of the decision to join an accelerator into one specific step during the entrepreneurial process is not of much value, as it could be argued that this decision does not necessarily lie in one specific stage of the entrepreneurial process. This stands in contrast to incubators, which have been attributed to the opportunity exploitation stage in previous literature (Choi & Shepherd, 2004). This can not be generally assumed

[3] *CrunchBase. (July 14, 2021). Number of investments made by startup accelerators in Europe as of July 2021 [Graph]. In Statista*. Retrieved November 02, 2021, from https://bit.ly/3nTfqaa

[4] *CrunchBase. (July 14, 2021). Number of investments made by startup accelerators in the United States as of July 2021 [Graph]. In Statista.* Retrieved November 02, 2021, from https://bit.ly/3byYGQ4

for accelerators because i) many accelerator programs are designed in a way that they deliver input and create weekly sprints around all topics concerning the entire venture creation process (e.g. from refining the business model to finding investors etc.), which means that the value of joining them is not limited to one specific aspect of business development and ii) the startups that enter accelerators can be at very different stages of this process since in practice, startup accelerator programs do not necessarily limit participation in their programs too strongly to startups in explicit stages or with specific milestones already achieved. Oftentimes, accelerators rather prioritize the growth potential of a startup idea or exceptional personalities of founders in their process of selecting participants[5]. This means that an accelerator cohort can consist of startups that are still creating their MVP as well as startups that have already launched and acquired a small customer base. For this reason, an entrepreneur in the situation of making the decision of entering such a program may be affected by, or considering topics that theoretically fall under the context of one entrepreneurial activity, while another entrepreneur making the same decision could be in a completely different stage of venture creation. These circumstances make the classification of this specific entrepreneurial decision into an existing entrepreneurial decision making concept difficult, due to the novelty and uniqueness of the context. Thus, considering the classification of entrepreneurial decision making contexts by Shepherd et al. (2015), all settings are recognized as relevant for the substance of this study (aside from exiting, which has no importance in this research objective).

In this following section, some of the central factors of influence on different decision-making contexts, according to the research articles identified by Shepherd's review paper of entrepreneurial decision-making research, will be elaborated on and put into relation to the research objective of this study. In *Table 2,* the categorizations of entrepreneurial decision-making contexts by Shepherd et al. (2015) as well as the factors that influence the decisions made in the respective contexts were summarized and put together as an overview.

2.3.1. Context of the main entrepreneurship activities

The activities of opportunity assessment, entry and opportunity exploitation present different relevant situations in which founders need to make decisions under a high level of uncertainty. For this study, these processes are not necessarily applicable in the sense of their conventional definition which relates the 'opportunity' to the business opportunity, but rather in the sense of the opportunity to join an accelerator for the purposes of developing their venture after already deciding to act on the opportunity or idea. Furthermore, first-time founders or entrepreneurs entering a new and unknown industry with their venture might see the startup accelerator as the key to realise their efforts, without which it would be significantly more difficult to seize the identified business opportunity. In this case,

[5] *Founder Institute. (2021). Learn about the Founder Institute's pre-seed startup accelerator program. The Founder Institute.* Retrieved November 3, 2021, from https://fi.co/overview

not having the option of an accelerator program as a support service could affect an inexperienced entrepreneurs' decision of moving forward with the idea.

At the very beginning of the process, entrepreneurs are usually assessing and evaluating whether an opportunity is worth pursuing for them. During this stage, a few factors have been found to be especially pertinent (Shepherd et al., 2015). First, the human capital of the entrepreneur in terms of opportunity-specific knowledge plays a role. For instance, founders who have more knowledge in the field of the respective opportunity are more likely to decide that it is worthy to act on and invest in (Haynie et al., 2009; Mitchell & Shepherd, 2010). Similar to the notion of less proprietary knowledge making an opportunity less attractive, the entrepreneur's perceptions of environmental conditions surrounding the opportunity such as market conditions and uncertainty also influence the assessment, where e.g. uncertainty in the market due to a new or disruptive technology negatively affects the opportunity assessment (McKelvie et al., 2011).

Entrepreneurial entry is theoretically considered as the setting in which an individual decides to embark on the journey to founding their own business and becoming an entrepreneur (Shepherd et al., 2015). As mentioned, accelerator participants may be first-time entrepreneurs trying to increase their chances of succeeding by making use of a support program that will help them accelerate their planned venture. Therefore the decision of joining the program may, in some cases also be linked to that of founding a business in general, as for some, they may be dependent on each other. A multitude of articles have inspected the setting of deciding to become an entrepreneur, thus several factors were identified to be applicable at this stage (Shepherd et al., 2015). For instance, the differences in individuals' attitudes, abilities and opportunity costs of becoming an entrepreneur, and change thereof over time have been found to be of relevance while making this type of decision (Lévesque & Minniti, 2006). Another factor is based on the different decision-making mechanisms used by entrepreneurs, e.g. conducting their own systematic search or relying on their network for information and resources during the decision-making (Patel & Fiet, 2009; Shepherd et al., 2015).

Another relevant entrepreneurial activity following Shepherd et al. is opportunity exploitation, which is defined as "activities conducted in order to gain economic returns from the discovery of a potential entrepreneurial opportunity" (Wiklund, 2015). Entrepreneurs' knowledge and experiences have been proven to affect internalization and externalization decisions during decision-making in the context of opportunity exploitation (Wiklund & Shepherd, 2008) and could also affect their decision of whether to make use of an 'external' support program such as an accelerator in their effort to further develop their venture, as existing research shows that previously obtained experience influences entrepreneurial decision making (Wiklund & Shepherd, 2008). Similarly, the role of different attitudes and their impact on decisions have also been studied, for example regarding the acquisition of funds (Shepherd et al., 2015). Here, especially aspects such as attitudes toward control, ownership, risk and

uncertainty play a role in the decisions being made (Alvarez & Parker, 2009; Auken et al., 2009; Shepherd et al., 2015). For instance, some entrepreneurs might be less attached to the aspect of control and ownership than others, which could be a supporting factor for entrepreneurs thinking about joining accelerators when a percentage of equity is demanded in return for seed investment.
Furthermore, differences in the extent to which decisions are planned beforehand also play a role during the opportunity exploitation stage. Literature on this topic has investigated the role of planning in entrepreneurial strategies, as planning is seen as a tool to aid founders in assessing different actions and strategies (Chwolka & Raith, 2012). The value of business plans for startups is regularly discussed in entrepreneurship literature, with different opinions emerging from the research (Chwolka & Raith, 2012), however other, more specific aspects of entrepreneurs exploiting an opportunity and *how* they do so (e.g. the plan to enter an accelerator program before the launch of the startup) have not been the focus of many studies so far.

Lastly, heuristics and biases arising during the decision-making while conducting these entrepreneurial activities have been studied as well, as entrepreneurs are faced with situations of high uncertainty and complexity, in which they are under pressure to make decisions for the benefit of their venture (Busenitz & Barney, 1997; Shepherd et al., 2015). Because of the speciality of their situation, entrepreneurs have been found to be more influenced by biases and heuristics in their decision making than other individuals, implying their weight in the decision-making of founders (Busenitz & Barney, 1997). Moreover, biases such as optimism and overconfidence are substantial stimuli in entrepreneurial decisions. Although they are similar traits, overconfidence is more associated with negatively influencing decisions (Shepherd et al., 2015). However, both have been proven to lead entrepreneurs to make decisions about the progression of their ventures, where negative signals from the market have been disregarded due to being overly confident or optimistic (Lowe & Ziedonis, 2006; McCarthy et al., 1993).

Entrepreneurship Activities				**Decision-maker**	**Environment**
Opportunity assessment decision	**Entrepreneurial entry decision**	**Opportunity exploitation**	**Heuristics & biases in the decision-making process**	**Characteristics of entrepreneurial decision-maker**	**Environment as entrepreneurial decision context**
1. Human capital 2. Emotional response to opportunities	1. Aspirations & attitudes 2. Abilities 3. Opportunity costs	1. Extent to which decision-making is planned 2. Knowledge & experiences	1. Reliance on heuristics and existence of biases 2. Entrepre-neurs are more	1. Gender 2. Amount & nature of previous experiences	1. Faced industry conditions 2. Faced institutional environments

3. Perception of environmental conditions	4. Change of attitudes, and/or opportunity costs over time 5. Motivation to start business 6. Entrepre-neurial self-perception 7. Use of decision-making techniques/ tool 8. Perception of external environmental factors	3. Organi-zational context 4. Sources and timing of funding: knowledge of alternatives 5. Different attitudes leading to different funding decisions 6. Perception of moral behaviour	biased than non-entrepreneurs 3. How heuristics facilitate entrepreneurial decision making 4. Optimism 5. Over-confidence 6. Reliance on experience	3. Meta-cognitive thinking 4. Risk assessment 5. National and cultural heritage	3. Nature of the environment

Table 2: Factors affecting entrepreneurial decision making in three main entrepreneurial contexts (Overview created on the basis of summarized findings of Shepherd et al. (2015))

2.3.2. Context of the decision-maker's characteristics

Shepherd et al. (2015) also studied articles that thematize differences in entrepreneurial decision-making that stem from the characteristics of the decision-makers themselves. These characteristics can be in the form of e.g. gender or cultural heritage. Differences between male and female entrepreneurs have an impact not only on their perception of opportunities (Langowitz & Minniti, 2007), but they also play a role in several other decision-making settings, where i.e. the existence of family and the respective responsibilities have differing effects on the entrepreneurs' decision-making (Powell & Greenhaus, 2010; Shepherd et al., 2015).

Existing research shows that previously obtained experience is not only relevant for entrepreneurial decision making in terms of its presence or amount but also the nature of those experiences affect decision making (Shepherd et al., 2015). Previously gained experiences in venture creation affects not only strategic decisions (Wiklund & Shepherd, 2008) but also characteristics of the decision-making process (i.e. speed of decision making) (Forbes, 2005a). Looking at the decision of participating in an accelerator, the existence (or the lack) of a start-up background could play a role during this decision. For example, an entrepreneur who had a problematic or failed experience with creating a company might try to stay on the 'safe side' during their next attempt, while a successful experience might increase feelings of self-confidence and -reliance against the urge to participate in such a program. A related concept to self-confidence from experience is entrepreneurial self-efficacy, which is the "degree to which individuals believe they are capable of performing the tasks associated with new-venture management" (Forbes, 2005b, p. 599). Studies have shown that self-efficacy affects

decision-making in several aspects such as decisions on financial and time investments into the entrepreneurs' ventures (Cassar & Friedman, 2009).

2.3.3. Context of the decision-maker's environment

Aside from the characteristics of the founder that might influence decisions being made, the perception of the environment into which the founder aims to enter by creating their startup, or that in which they are already operating has also been found to play a role in the decision-making (Shepherd et al., 2015). One intriguing study (Lévesque et al., 2009), which also integrates the perspective of entrepreneurial learning theory, showed that the perception of the industry conditions in terms of its hostility as a learning environment affects the entrepreneur's decision of when to enter a market and how long they should wait to do so. Here, the perceived benefits from learning by not entering the market are put against the risks of missing out on competitive advantages and are thereby factors that the entrepreneur takes into account when thinking of entering an industry (Lévesque et al., 2009). This aspect can also be linked to the participation in accelerator programs, which usually takes up three to six months of the founders' time and therefore may delay their plans of launching the startup and entering the market. It could be argued that by deciding to enter such a program in order to learn from it, a founder who has not launched their business yet, might simultaneously be choosing to potentially miss out on competitive advantages due to entering the market later. Founders making this decision, therefore, need to take into account the market that they aim to enter or create and its conditions. Next to industry conditions, Shepherd's review also identified the perceived institutional environment and the nature of the environment as decision-making factors. One example here are institutional conditions, which can influence entrepreneurs' decision-making i.e. in the sense that specific regulations can lead entrepreneurs to make corresponding choices (Dorado & Ventresca, 2013; Lu & Tao, 2010; Shepherd et al., 2015).

The factors affecting entrepreneurial decision making in the aforementioned contexts of entrepreneurial activities, identified in the extensive literature review by Shepherd and colleagues have provided an academic background for the topic of this study and aided as an inspiration for the creation of interview questions that were used in the data collection phase. *Table 2* shows an overview of the categorizations of entrepreneurial decision-making contexts by Shepherd et al. (2015) as well as the factors that influence the decisions made in the respective contexts.

3. Research design and method

The aim of this research project is to achieve a better understanding of the aspects that influence entrepreneurs when making the decision of entering an accelerator program, and to arrive at an illustration of the key factors that play a role in this specific entrepreneurial choice during the stage of developing a startup. Because of the aforementioned fragmentation and research gaps in the fields of entrepreneurial decision making and accelerator research in general, as well as the mainly quantitative extant research (Busenitz & Barney, 1997; Cohen et al., 2019; Forbes, 2005a; Mullins & Forlani, 2005; Welpe et al., 2012), scholars have called for new and more diverse approaches in research studies concerned with this context (Shepherd et al., 2015). To develop a deeper understanding about entrepreneurial decision making, this study made use of qualitative data collection through expert interviews and data analysis using the Gioia methodology, which will be discussed in the following.

3.1. Data collection through expert interviews

The data was collected in the form of transcripts from expert interviews, as this method poses as a useful tool to understand individuals' perspectives and how they arrived at them (King, 2004). Compared to other methods, expert interviews offer "practical insider knowledge" (Bogner et al., 2009, p. 2) as the researcher has the opportunity to ask open questions to individuals who first-handedly experienced the phenomenon in question. As the research goal of this study was to understand what factors influenced the decision to participate in an accelerator program, expert interviews were used with the aim of uncovering these underlying aspects.

In order to answer the research question „What factors influence the entrepreneurial decision-making of the choice to join an accelerator during the venture development phase?", an exploratory qualitative research approach was chosen for this study, as exploratory studies are particularly useful for answering research questions beginning with "how" and "what" and because this type of research often includes expert interviews as a data collection method (Saunders et al., 2015). To exploit the opportunity of gaining extensive insights from expert interviews, they were held in a semi-structured manner. This type of interview fits the research goal and the inductive research design of this study best, as it is rather flexible in its design and therefore allows for new knowledge to arise depending on the course of the conversation (Saunders et al., 2015). Semi-structured interviews are also recommended for the collection of data that will be subsequently analysed using the Gioia method (2013) by the authors of the Gioia method, who describe semi-structured interviews as "the heart" of this type of research and emphasize the advantage of being able to "obtain both retrospective and

real-time accounts by those people experiencing the phenomenon of theoretical interest" (Gioia et al., 2013, p. 19).

Interview guide 1 → Interview guide 2	Interview guide 2 → Interview guide 3
• changed question about the startup's industry into an invitation to openly tell the researcher about the startup that the entrepreneur entered the accelerator program with • changed question about "how risky" the entrepreneur perceived their situation with the startup into a question that asks about what specific risks were perceived • added questions about the outcomes that the entrepreneur hoped for when deciding to join an accelerator program • added questions about the perception of competitors in the market at the time of the decision (and if/ in how far this affected their decision making) • changed the order of topics according to the flow of conversation	• added open question about if and what pros and cons were weighed against each other during the decision making • added open questions about their thought process and first considerations during the decision making • changed questions about personal risk aversion and startup-specific risks to be about risks that were perceived in regards to the decision to join the accelerator • added question about joining several accelerator programs • added questions about other accelerator programs where the respondents (considered) applying and then decided against or where they applied but withdrew their application • added open question about their vision for their 'perfect' accelerator program

Table 3: Examples of interview guide adaptations

Furthermore, the suggestion of continuously taking notes during the conduction of interviews as well as the recommendation of using a carefully created interview guide or protocol was followed during this research. The interview guide was created while roughly considering the academic work on entrepreneurial decision-making factors listed in *Table 2* as inspiration, while still maintaining a sort of ignorance to the prior research and an openness to let the interview guide be adapted by the conversation with the interviewees, due to the inductive nature of this study. Especially as, according to the Gioia method (2013), the interview guide used for the interviews should not be followed in a standardized manner throughout all interviews but should instead be continuously developed and adapted in accordance with the flow of conversation with interviewees and the resulting findings. Said approach was followed during this research project as well, as the researcher was open to digging deeper into especially intriguing aspects mentioned by the respondents and repeatedly adapted the interview questions and - guide. Overall, the interview guide underwent two major adaptations, which were the results of the conversations with earlier interviewees. Some of the most relevant changes can be found in *Table 3*. An example of an interview guide used during interviews can be found in *Appendix A*.

The expert interviews were conducted and recorded via Zoom, for which the interviewees received an informed consent form beforehand. The audio recordings were transcribed using the Amberscript[6] software, which allows for automatic transcription of audio and video recordings. As the software is prone to include errors during the automatic transcription, all transcripts were manually revised and corrected afterwards.

3.2. Sample

Using expert interviews as a data collection method requires experts of the phenomenon in question as interviewees. Gläser and Laudel (2009, p. 117) defined experts as "people who possess special knowledge of a social phenomenon which the interviewer is interested in". In this case, experts were 1) entrepreneurs who joined an accelerator program that is in line with the definition of startup accelerator programs used in this study (see *section 3.2.1.*), and 2) entrepreneurs who seriously considered joining a startup accelerator program but eventually decided against it, as these two groups would offer first-hand insights into their decision for, or against joining an accelerator program as well as clarify the different roles that specific aspects have played in their decision making.

It should be noted that the strategy to recruit the second group of entrepreneurs was to ask interviewees at the end of the interview about possible connections they have to such entrepreneurs, who have considered an accelerator but eventually did not join one. However, this did not yield any results and due to the fact that this group of entrepreneurs could not be identified without knowing them, their recruitment turned out to be impractical. In an attempt to substitute the insights that would have been gained from including their first-hand perspective, the interview guide was adapted to include questions asking accelerator graduates whether they considered joining another accelerator program at any point after they have graduated their respective one. Subsequently, the respondents were also asked to elaborate on why they chose to do so or what their reasons for not doing so were. This resulted in many valuable insights about the factors that had an opposing effect in the decision making and which aspects of the entrepreneurs' experience during accelerator programs made them decide against joining another one. Although it does not replace the value of gaining the perspective of the originally intended group of entrepreneurs, valuable insider perspectives were obtained through these questions. This will also be reflected in the limitations of this study.

[6] *Amberscript: Audio & Video Transcription – Convert speech-to-text*. (2021) Retrieved October 14, 2021, from https://www.amberscript.com/en/

3.2.1. Guidelines for the selection of accelerator programs

It was specifically important to create a list of guidelines about what sort of programs can be counted as startup accelerators within this study, due to the fragmentation and discrepancy that exists between startup accelerator programs, e.g. in terms of how they are designed and what services they provide (Cohen et al., 2019). For the sake of delineating accelerators from other incubation models (such as incubators), the following guidelines for accelerator programs, based on Miller et al. (2011, p. 3) were used as a foundation for the recruitment of entrepreneurs that graduated from accelerator programs:

a) "An application process that is open to all, yet highly competitive
b) Provision of pre-seed investment, usually in exchange for equity
c) A focus on small teams, not individual founders
d) Time-limited support comprising programmed events and intensive mentoring
e) Cohorts or 'classes' of startups rather than individual companies".

These guidelines are in line with the definition of Cohen et al. (2019), which also includes the aspects of a limited timeframe for the program, a cohort-based design and supporting the startups with their development. The above-mentioned guidelines were taken into account when conducting desk research on programs that ideally are more well known and have been running for a few years, as this would increase the number of entrepreneurs that know or have entered the accelerator program. After researching and becoming familiar with the different programs, those that are more global and reputable have started to emerge from the research, Techstars and YCombinator being the most successful and competitive ones. Using the knowledge base from the conducted research, the websites of the most promising and appropriate programs were scanned in order to assure that the program attributes are consistent with the aforementioned definition of accelerator programs used for this study. Afterwards, graduates of these programs were identified and contacted using the websites of the programs as well as the institutions' profiles on LinkedIn.

3.2.2. Sample size

Considering the research goal of developing an understanding of the decision making of entrepreneurs that chose to join accelerators, and acknowledging the lack of consistent theory backing this topic, this study follows an interpretivist philosophy, which is especially useful for studies that try to achieve novel perspectives, where the interpretations of the researcher are focal to the outcome, which is also a key characteristic of the Gioia methodology utilized for the data analysis of this study (Gioia et al., 2013; Saunders et al., 2015). The sample size for semi-structured interviews is generally recommended to be between five and 25 (Saunders et al., 2015). Considering the generally small-scale and in-depth nature of interpretivist, inductive research and taking into account the

time-frame for this study as well as the time needed for the analysis of qualitative interviews (Cassell & Symon, 2004) the aim was to recruit a representative group of between 15 to 20 entrepreneurs. In order to achieve this, more than 100 graduates were contacted via LinkedIn, using the premium feature of the platform. Furthermore, the researcher also posted a call for interviewees on their own LinkedIn profile for their personal network to see, which includes many young entrepreneurs from the researcher's masters program IMES[7]. In addition to these forms of recruitments, interviewees were consistently, at the end of the interview, asked about recommendations for other entrepreneurs they may know that entered an accelerator program as well as entrepreneurs who, to their knowledge, have thought about joining an accelerator program but eventually decided against this. As a result of these combined efforts, approximately 24 entrepreneurs have responded and eventually, the researcher was able to conduct 18 interviews, lasting between 22 and 35 minutes. In the following section, the sample of 18 entrepreneurs will be described in detail.

3.2.3. Description of the sample of experts

For the purposes of this research study, the aim was to recruit a sample of entrepreneurs that is also representative of the general population of cohorts in accelerator programs, while striving for diversity and replicability (Cassell & Symon, 2004). For instance, the average global gender ratio among entrepreneurs within accelerator cohorts is around 50 percent[8], therefore this ratio was successfully represented in the sample for this study as well.

Figure 1: Overview of accelerator program locations based on the sample of the study

[7] IMES (Innovation Management, Sustainability and Entrepreneurship) masters program at Technical University of Berlin

[8] *International Finance Corporation. (February 2, 2020). Share of startups with female founders among applicants and cohorts of accelerator programs globally in 2020, by share of women on selection committee. In Statista.* Retrieved October 14, 2021, from rb.gy/bb7qbc

Furthermore, by contacting a high number of entrepreneurs that entered accelerator programs all over the world, the researcher was able to recruit a sample that entered a globally scattered group of accelerator programs. This was also facilitated by the fact that many big, established accelerators have expanded their programs to be offered in several locations worldwide (see *Figure 1* and *Table 4*). For example, Founder Institute, one of the programs chosen for this sample, advertises for their program by stating that they are the "world's largest pre-seed startup accelerator" as they are active in more than 200 cities across six continents[9].

Country	Number of respondents that entered an accelerator in this country
Australia	1
Canada	2
China	1
England	4
Germany	7
Italy	1
Nepal	1
Netherlands	1
Sweden	1
UAE	1
USA	1
Sum	**21**

Table 4: Number of respondents per country of accelerator location

Considering the guidelines for accelerator programs to be encompassed (see *section 3.2.1.*), the following startup accelerators were included in this sample:

Accelerator program	Location(s)	Description	Fulfillment of guidelines for accelerator programs (3.2.1.)
F-lane[10]	Berlin	• created by Vodafone Institute for Society and Communication in partnership with Yunus Social Business • focused on tech-startups that empower women • until now five cohorts have graduated	a) open application but highly competitive due to long list of selection criteria and small cohorts b) one upfront investment (usually to cover living expenses), does not take equity, after that it does not invest but facilitates investors c) looks for teams but solo founders can also join

[9] *Learn more about our global startup accelerator locations. The Founder Institute. (2021).* Retrieved October 15, 2021, from https://fi.co/global

[10] *Programme. (2020, August 3). F-LANE.* Retrieved October 15, 2021, from https://www.f-lane.com/programme/

			d) 5 weeks duration, with events, content sessions, etc. e) a batch of startups (around five) results in one cohort
Founder Institute[11]	200+ cities, six continents	• globally largest pre-seed accelerator • 5000+ startups graduated • program was started in Silicon Valley	a) only about 30% of applicants are selected b) no direct investment but facilitates investors, takes 4% equity c) encourages teams to apply but also allows solo-founders d) four month program with sessions, meetings, talks, etc. e) 20-50 founders in one cohort
Founders Factory[12]	London, Johannesburg, Paris, New York, Bratislava	• include startups across multiple sectors, but special focus on tech • work with 11 industry leaders (e.g. Easyjet, Marks & Spencer, Johnson & Johnson)	a) open application, looking for the most exceptional founders b) startups receive £30k investment in return for 4-7% equity c) teams and solo-founders can join d) six month program e) no batches, but connection to fellow founders in the network
Next Launchpad Nepal[13]	Nepal	• focus on startups in Nepal • cooperates with industry partners in Nepal, which also includes mentorship by them • 15 startups have graduated	a) only five to ten businesses get selected b) no direct funding but facilitate investment c) strongly encourage teams, occasionally allow solo-founders d) three month program e) one batch per year gets selected
Startupbootcamp[14]	20+ cities, six continents	• Global accelerator that has several programs focused on specific industries • More than 100 cohorts with 950 startups have graduated, of which 76% are still active	a) extensive selection process, 20 teams get invited to final selection days, 40-60% of them get selected b) €15k investment in return for 6-8% equity c) strong focus on teams, occasionally allow solo-founders d) three month program, ends with demo day e) 8-12 startups get selected for one cohort

Table 5: Overview of startup accelerators selected for the study

[11] *Founder Institute. (2021). Learn about the Founder Institute's pre-seed startup accelerator program. The Founder Institute. Retrieved October 15, 2021, from https://fi.co/overview*

[12] *Accelerator Program. (2021). Founders Factory.* Retrieved October 15, 2021, from https://foundersfactory.com/accelerator/

[13] *Next Launchpad*. (2021). Next Venture Corp. Retrieved October 15, 2021, from https://nextventurecorp.com/launchpad

[14] *How Startupbootcamp works. (2018, February 6). Startupbootcamp.* Retrieved October 15, 2021, from https://www.startupbootcamp.org/how-it-works/

The accelerator programs shown in italics in the *Table 6* ('Conscious Venture Labs Maryland', 'Creative Destruction Lab', 'Next Founders', and 'Rockstart NL') are programs which respondents have entered aside from the accelerator program for which their participation led to their inclusion in the sample. For example, one interviewee who was recruited because of their participation in Founders Factory, revealed during the conversation that they also joined the accelerator programs 'Creative Destruction Lab' and 'Next Founders', which do not necessarily comply with the definition of accelerator programs used within this study (see *section 3.2.1*.). Therefore all accelerator programs shown in italics in the table below do not necessarily correspond with the guidelines established for the programs to be included in this study, but they were nevertheless included in the overview for the sake of complete information. This also explains the sum of 21 interviewees in *Tables 4 and 6*, although only 18 respondents were recruited.

Accelerator program	Country	Number of Interviewees
Conscious Venture Labs Maryland	*USA*	1
Creative Destruction Lab	*Canada*	1
F-lane	Germany	4
Founder Institute	China	1
	England	1
	Germany	2
	Sweden	1
Founders Factory	England	3
Next Founders	*Canada*	1
Next Launchpad Nepal	Nepal	1
Rockstart NL	*Netherlands*	1
Startupbootcamp	Australia	1
	Germany	1
	Italy	1
	UAE	1
Sum		**21**

Table 6: Number of interviewees per accelerator program per location

3.3. Data analysis

3.3.1. Using the Gioia method for data analysis

In order to answer the above-mentioned research question and analyse the qualitative data that was collected from the sample, this research made use of the Gioia methodology for analysing qualitative data. This methodology has its foundation on interpretive research, and the purpose is to capture and model respondents' understandings (Gioia et al., 2013; Langley & Abdallah, 2011), which is in line with the aim of this study to explore and describe key factors that influence the decision making of the choice to enter an accelerator program. Although the method by Gioia and colleagues lies within the field of grounded theory (Glaser et al., 1968; Strauss & Corbin, 1990), the authors have established a specific approach which aims at developing new concepts from inductive research in a qualitatively rigorous way (Gioia et al., 2013, p. 15). The paper published by Gioia et al. (2013) offers an explanation of the method and provides guidelines for the data collection using semi-structured interviews (see section 3.1.) as well as the analysis process, which were all followed in this research study in order to ensure qualitative results. This approach consists of four main components (Gioia et al., 2013): taking the conducted interviews as a foundation, the transcripts are coded and analysed to establish a set of First-order concepts, followed by a list of Second-order themes, which eventually distills into a few aggregate dimensions. As the last step, a data structure is created, which visualises the emerging concepts and themes as well as the process of arriving at them. The following section will entail detailed explanations of how the data analysis was executed.

3.3.2. Execution of the Gioia method

As mentioned above, the researcher made use of the guidelines for utilizing the Gioia method described by the publishers in their paper explaining the method (Gioia et al., 2013). In order to commence with the analysis, preliminary work had to be done in terms of recording and editing the transcripts which act as the basis for the qualitative study. *Section 3.1.* entails a description of how the interviews were conducted, recorded and transcribed.

After the initial editing of the transcripts, all transcripts were transferred into the Atlas.ti software[15], which is a software that allows qualitative analysis of texts. All 18 documents were uploaded in order to undergo a first coding procedure, where an effort was made to stay close to the original language used by the informant. This step resulted in 394 initial codes. Afterwards, all initial codes were transferred into an excel sheet and by making use of the concept of "open coding" as well as constant

[15] ATLAS.ti Scientific Software Development GmbH. (2021). *ATLAS.ti: The Qualitative Data Analysis & Research Software*. ATLAS.ti. Retrieved October 18, 2021, from https://atlasti.com/

comparison of the initial codes and excerpts, 77 First-order concepts were established by grouping codes into categories and labelling them.

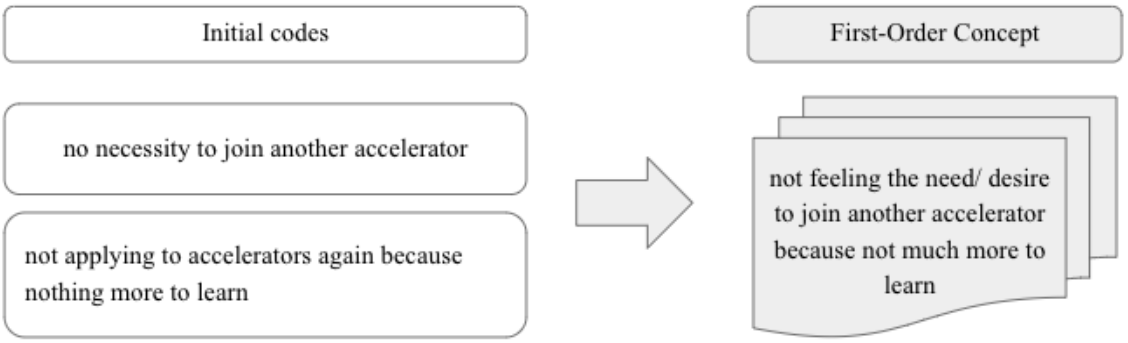

Figure 2: Example of First-order concept development

Using the tool of pivot tables in excel, the list of First-order concepts along with the respective codes was displayed and further analysed so that Second-order themes can be established. For this purpose, the array of First-order concepts was analysed manually by performing axial coding and linking the relationships between First-order concepts. In this step, the importance of the researcher considering themselves as a "knowledgeable agent" is emphasized and they are urged to ask themselves "what's going on here?" in pursuance of being able to understand the data on multiple levels (Gioia et al., 2013, p. 20; Strauss & Corbin, 1990). Adhering to this protocol, 11 Second-order themes were established from the data.

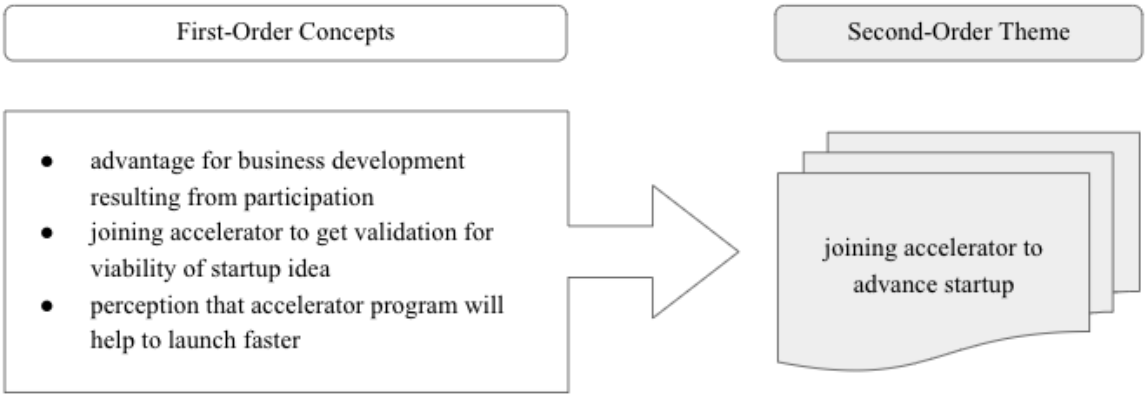

Figure 3: Example of Second-order theme development

Following the development of Second-order themes, the method specifies the comparison and refinement of the emerged themes into more condensed, aggregate dimensions, also described as "'core categories' that serve to summarize the elements of an emerging theoretical model" (Langley & Abdallah, 2011, p. 17). The final step of the Gioia method includes establishing a data structure that visualizes the First-order concepts, Second-order themes and aggregate dimensions as well as

represents the process by which the researcher has been able to develop them. The established data structure will be presented in detail in *section 4* of the findings. *Figure 4* summarizes the data analysis steps that were diligently followed on the basis of the Gioia methodology and the respective suggestion for its execution (Gioia et al., 2013).

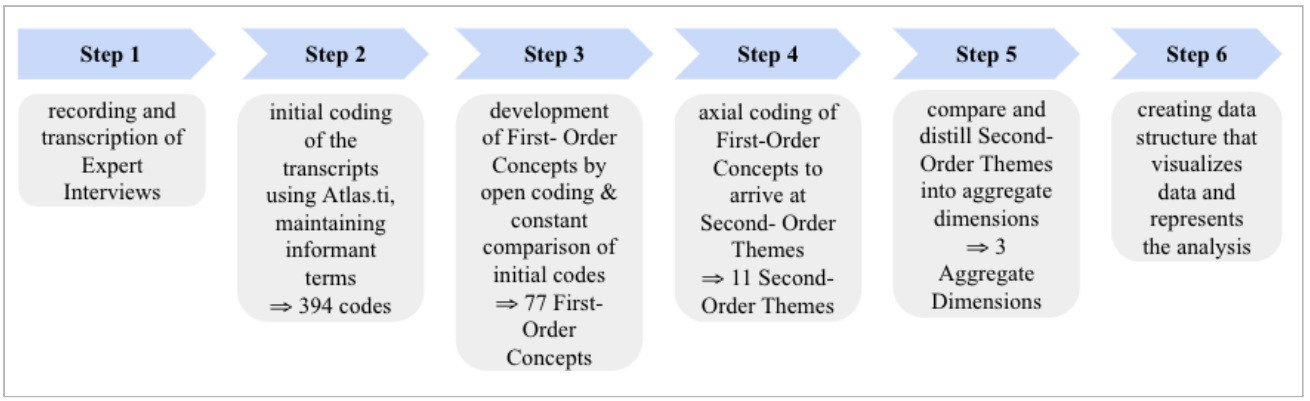

Figure 4: Overview of the data analysis steps, based on Gioia et al. (2013)

4. Findings

As illustrated in the data structure depicted in *Figures 6a,b,c*, three main dimensions have arisen from the in-depth interviews that were conducted with 18 startup accelerator graduates, namely 1) the role of prior personal and business experiences, 2) influences from the perception of external factors, and 3) the approach to making the decision. *Figure 5* shows the data structure depicted in *Figures 6a,b,c* in summary and illustrates the influencing factors on the decision-making of accelerator graduates. In this section, the themes and dimensions that emerged will be presented and elaborated on.

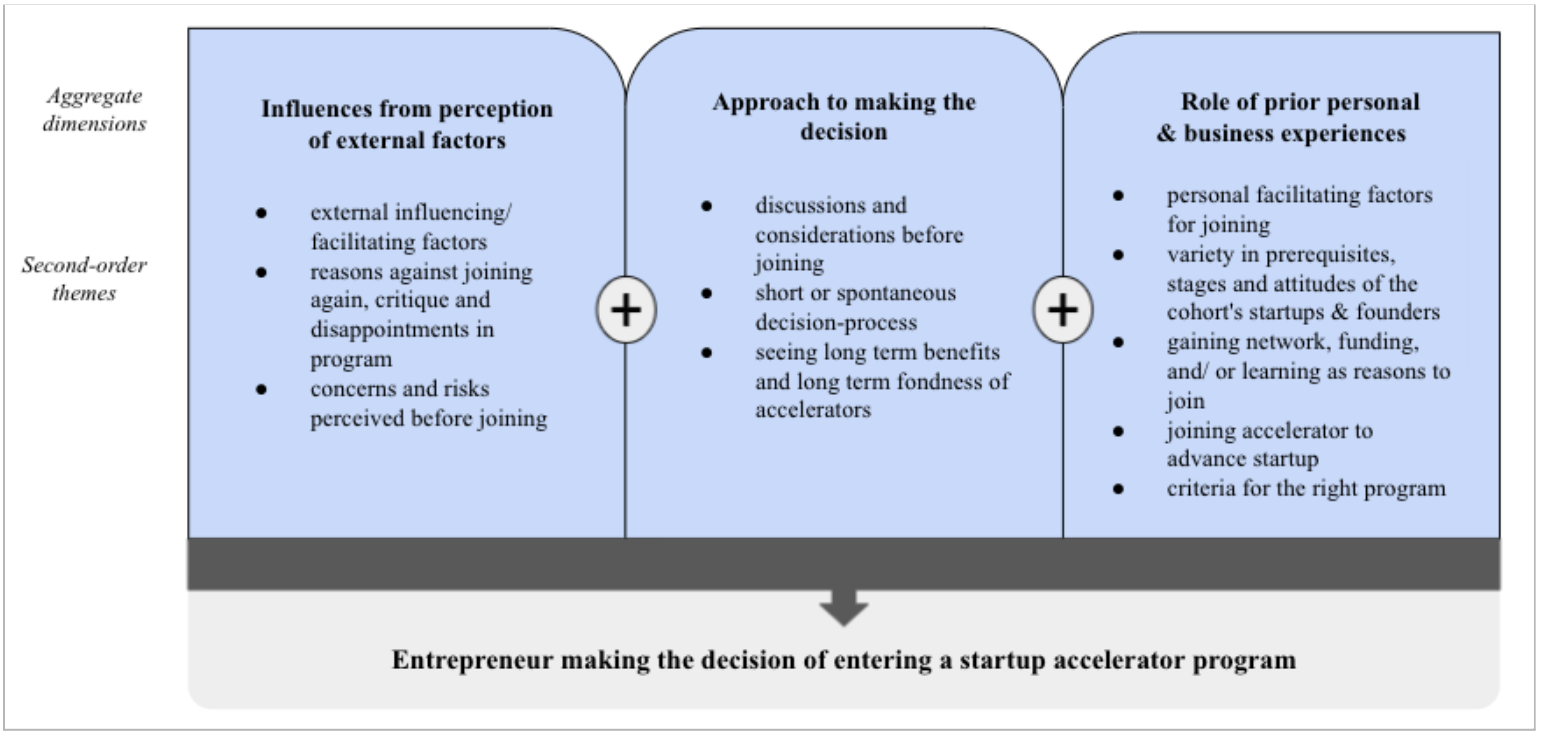

Figure 5: Influencing factors on the decision-making (overview of aggregate dimensions and second order themes)

4.1. Role of prior personal and business experiences

The first central dimension that has surfaced from the data is the role of the entrepreneurs' prior personal and business-related experiences while making the decision of choosing to join an accelerator program. It has become apparent through the in-depth interviews that differences in prior personal experiences as entrepreneurs or as individuals, as well as experiences in their prior career led to very different situations, attitudes, and prerequisites, which in turn affected the decision making of the founders. Five themes are included in this dimension.

4.1.1. Gaining a network, funding, and/or learning as reasons to join

First of all, gaining a network in the target market or industry, as well as acquiring funding and learning were regularly mentioned by the interviewees as main reasons as to why they decided to join the respective startup accelerator. Some first-time entrepreneurs specifically saw the chance to learn from the mentors and their specified knowledge during the accelerator as a large benefit that would otherwise be difficult to have access to: "*So you get to learn on a day to day basis, you'd never get a chance to sit with them, of course. But because of this acceleration program, you know, you get to meet these people and make those connections and you never know when you'll need that in life*". Other entrepreneurs who were looking to start their business in the EU, but were foreigners themselves, saw the accelerator as their ticket to enter the market and acquire investment from European investors: "*There really are no possibilities for a Russian startup to get an investment in Europe. For instance, if you're a European startup, you have an idea you could go to a VC or something, or like it's a little bit more friendlier for local startups. But for us, I guess it was just the only option to go and for them to see our idea and see our team, etc*.". But also founders who already had more experience saw the access to funding, a network and learning as considerable benefits: "*My co-founder and I at that time had had a previous startup. So we generally knew how to go about that process. But again, we didn't know how to do that in the energy landscape. And that's when we started looking for what other innovation is happening in the energy industry. And then we just happened to come across lots of accelerators and we decided that would be worth pursuing*."

4.1.2. Joining an accelerator to advance the startup

The second theme regarding the dimension of the role of prior personal and business-related experiences in choosing to join an accelerator are reasons for developing or advancing a startup. Many founders were of the perception that the accelerator would help them advance their business development, as they hoped to use the accelerator in order to compensate for knowledge deficiencies in specific aspects such as knowledge of legal and tax systems in the target market, acquiring pitching skills, learning about scalability and strategic growth, or learning about financial aspects such as investor due diligence and valuation: "*It was kind of a match, you know, it happened simultaneously. So I had that idea and I felt that I didn't have enough know-how, like there was a certain deficit that I felt I had. So that was definitely the biggest reason for me to join the accelerator.*" Aside from business development, founders also sought validation from the professionals in the accelerator in regards to the viability of their idea. This was specifically practical for entrepreneurs who were at the beginning of their journey and wanted to get validation and feedback before building their product: "*In a way, it was good for us because we had validation so early without a product, that was quite good in itself. We didn't have to build the product and then get validation for it*."

4.1.3. Personal facilitating factors for joining

Some influencing factors that stem specifically from entrepreneurs' prior personal experiences also became apparent from the data. For example, a lack of support from their personal environment, such as an uncooperative co-founder "*I wanted to maybe have other founders around, I could probably sense that my current funder, slash co-founder, was not really properly invested.*", or a feeling of loneliness affected the decision-making of some founders: "*I think subconsciously I was kind of seeking out just other people that I could work alongside and that could help me cause I was slowly losing my mind there trying to figure everything out by myself.*" These experiences affected entrepreneurs in the sense that they aimed to use an accelerator as a compensation for these negative experiences. Furthermore, being aware of their personal need for more structure, time and focus also facilitated their choice of entering the program. Several graduates mentioned that they felt an accelerator would allow them to have a dedicated period of time to focus on their startup idea, which they were lacking before: "*So I think for me, the difference that the accelerator had was that it kind of gave me almost the permission or at least the headspace to really focus in on it for an extended period of time where my other projects and my other work got paused basically and handed over to other people while I was doing it.*".

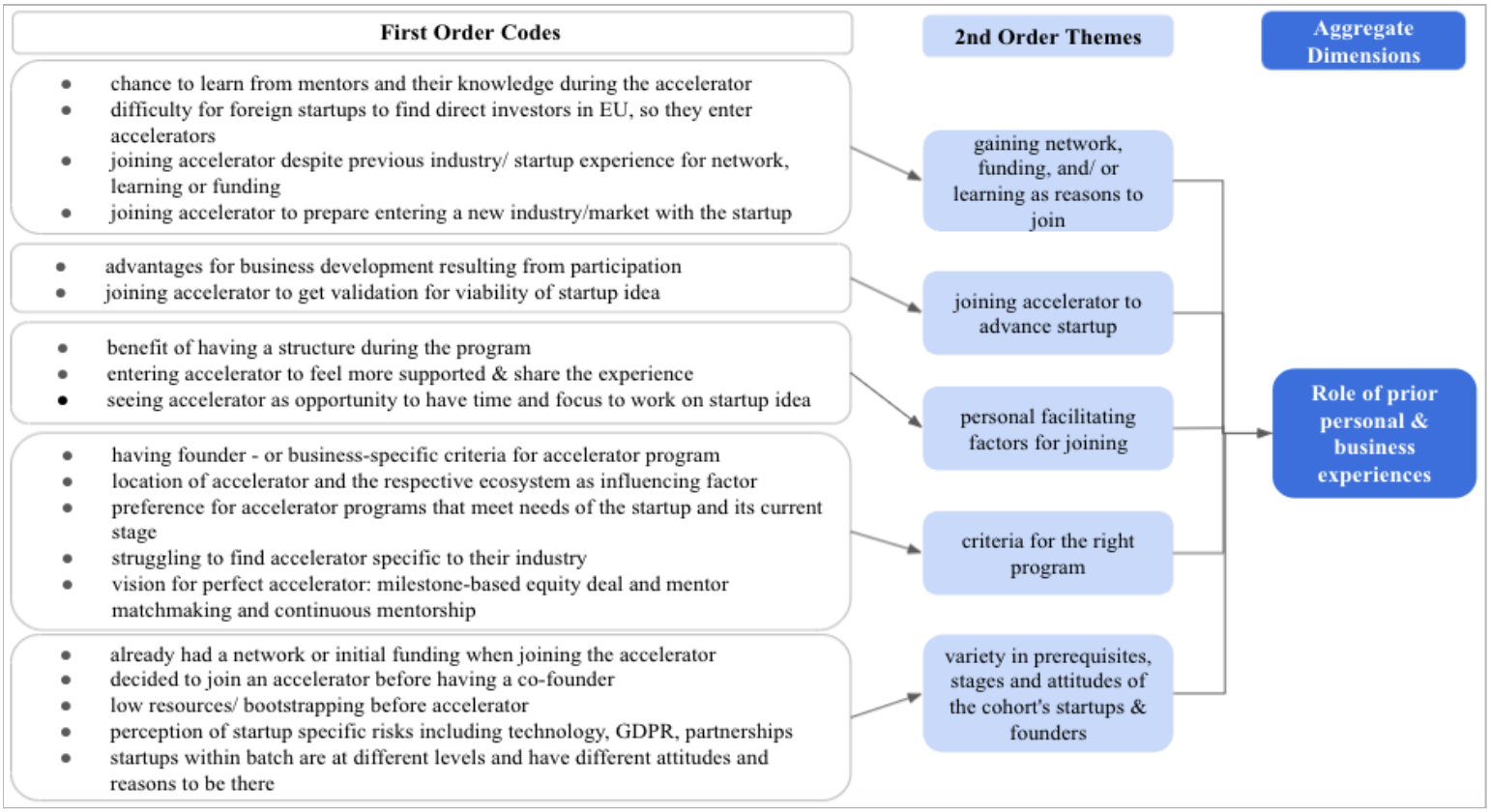

Figure 6a: Data structure showing first aggregate dimension

4.1.4. Criteria for the right program

Prior experiences also influenced the necessary criteria that an acceleration program needed to fulfill in order for the founder to consider participating in it. This aspect plays a bigger role in the decision of not if, but *which* accelerator program to join, and these criteria depend on the prior situation and circumstances of the founder(s), as well as on those of the startup. The interviewed entrepreneurs emphasized how important it was for the program in consideration to meet their specific needs at the time of their decision making. For instance, the program being held in the location of the target market or industry was of high relevance, as this would promise the most value from participating: "*And so I looked at some accelerators and I thought, OK, well, you know, there's a lot out there. But I wanted something which was specific to the financial services industry that I'm targeting, but also something that was specific to one of the regions that I'm targeting as well, which was the Middle East*." Especially the criterion of an accelerator being specific to their industry turned out to be more of a struggle for entrepreneurs that were trying to create a startup outside of the tech-industry. The available options for accelerator programs for these entrepreneurs are more limited, which was perceived as unfair: "*What I completely don't agree with is the fact how everyone right now is focused on tech startups because they're the most scalable, but they just don't even focus on other industries. [..] So that's just unfair, I think, with respect to entrepreneurs, because everyone has their own industry and expertise*." Other criteria were i.e. the language of the accelerator program, or the location where it would be held in general. For example, many entrepreneurs who joined accelerators in Berlin mentioned their aspiration to participate in an accelerator that operates in an attractive entrepreneurial ecosystem: "*So I'd never been to Berlin before, but it has a really rich and thriving tech space, which is quite social as well in a way that's very different to London. So that was really valuable. So the actual geographical location and going to the actual place to do it and meeting people there*".

4.1.5. Variety in prerequisites, stages and attitudes of the startups and founders

The last theme in the dimension of the role of prior experiences emphasizes the differences in prerequisites, stages and attitudes of the entrepreneurs and their startups within the cohorts. While some founders already had access to a network, a co-founder and/ or a team, or initial funding when they decided to join the accelerator program, ("*Yeah, well, I had a lot of resources and a big network because I have been in that industry for like fourteen years already. That was my reason for having a lot of connections and resources already*"), some others were mainly bootstrapping at the time of this decision: "*We didn't have any resources for this business. We didn't have any network, all our resources were bootstrapping*". These differences in prerequisites affected the individual reasons as to why the program was joined: *"So everyone had a different agenda. Let's say ours was completely*

different because we were there, we had the connections. We were missing the money and the team. So we got in because of that. And the others, they were all well funded. [..] I mean, everyone had a different story". Furthermore, entrepreneurs expressed different attitudes towards aspects such as the accelerator taking equity from the founders. While some had no problem with the deal and recognized the upsides, others felt like the accelerator managers were asking too much of the founders: "*There were a lot of people in our batch that did care, and a lot of drop offs because of that, you know, a lot of people had, I don't know why, but they had some some thoughts about that. And they felt skeptical about that, but not me*".

4.2. Influences from the perception of external factors

The second aggregate dimension that was able to be distilled from the data is that of influences that arise from the entrepreneurs' perception of external factors surrounding them. These external factors can either be i.e. in relation to the accelerator program itself, specific risks perceived in the situation, or other external circumstances. Three themes are included in this dimension.

4.2.1. Concerns and risks perceived before joining

First, startup founders were influenced by risks that they perceived about the choice of entering such a program and therefore had considerable concerns that were included in their decision making. For example, due to the program design of accelerators which requires a high amount of time and effort to be spent during a consecutive number of months, concerns about giving up full-time jobs occured: "*I guess it was more of a personal risk. I mean, taking three months off from your day job is a bit of a risk. Yeah, you don't know if your job will be there when you go back home, if you go back*". As a consequence, founders often had to put an effort into trying to find arrangements in order to be able to participate in the program. For example, some founders tried to combine their participation with their ongoing full time job, thereby taking on a considerable amount of work. "*I mean, every decision has its downsides. I was a very busy person. I had a full time job and I had like a kid and stuff. So I knew it would not be easy and that was not easy. It was like 70 hours a week that I spent almost some weeks on that project. And that was supposed to be a side project*".

Other concerns and risks were perceived in regards to the accelerator program itself, such as the quality or value of the program that the entrepreneur would gain in return for giving up equity to join. These concerns were also based on the fact that some entrepreneurs had the perception that not all accelerator programs are trustworthy: "*The only risk that we saw was the accelerator program getting more shares of the company, then they're supposed to basically. So what we were going through, we*

were just trying to understand what exactly are the terms of the accelerator programs that we were applying to. And yet there were some really, really scammy ones, for instance, where obviously it's really risky to go there".

Some founders' aversion concerning the required equity deal went so far as to pose as an exclusion factor when making a decision about the specific accelerator program to be joined. An equity percentage that was perceived as too high, or other demands such as IP rights, were considered major drawbacks to a program: "*They take obviously more equity than most accelerators because they're actually going to provide you with developer resources to build a product. That also means that they get a part of the IP for the product and in the shareholders agreement, it was all very favorable towards them and we were really unsure about how much control would we really have of our own IP and should we want to eventually separate from [them] or if we wanted to, I don't know, go our own way and build a product in a certain direction? If they still had control of the IP, how would that limit us? And they weren't too forthcoming with negotiating that. And so we just didn't feel comfortable in that position.*"

4.2.2. Reasons against joining again; critique and disappointments in the program

The second theme that appeared in the dimension of influences from the perception of external factors is that of factors, which entrepreneurs expressed as critique or disappointments in the accelerator programs. In turn, these were also the reasons for some entrepreneurs as to why they would rather not, or did not join another accelerator program.

First it should be noted, that while many entrepreneurs perceived a lot of value in joining accelerator programs, some were of different opinions. For instance, several participants found that the mentors that were advising them in the accelerator were not of high value to them or their business: "*The mentors weren't really of the right caliber. They weren't people who had started a fintech and driven it to a successfully established startup, which is then generating revenue and profit, which we could learn from*". This also applied to some of the investors or partners in the accelerator: "*The partners themselves were very reluctant to pave avenues for us within their organizations where we can actually successfully set up and run a proof of concept. In addition to that they didn't seem very highly committed*", which left many graduates disappointed in the program.

Similarly, a few founders did not think that accelerators are the right source of learning for them. For example, accelerators being a cohort-based program did not appeal to everyone: "*While I understand the concept of expanding your network and meeting like minded people, it is a big distraction. You know, spending an hour with a random stranger who happens to have a startup who has nothing to do with your business and doesn't care, and that is useless*". Thus, in hindsight, not all graduates recognized the benefits of co-working and sharing the experience with a cohort. Furthermore, others

did not feel the desire to join another accelerator program, as they did not think it would facilitate additional learning for them: "*This is a kind of why I don't apply to accelerators anymore because I don't think there's much more that I can learn, you know. At some point you're just recycling stuff, you know. So I kind of feel like you're still making progress but you're stuck in a rut because you keep on dancing to the tune of whatever accelerator you're in for that 20 or 30 k, you know*". This type of graduates also frequently expressed their preference of rather working on and developing their startup on their own, instead of possibly joining another accelerator program.

Aside from the added value, another important external factor was the application process of accelerators. Entrepreneurs expressed how an application process that is perceived by them as inconvenient or too complicated, influences their decision of continuing with the application or withdrawing: "*But honestly the process was just terrible and for some I just withdrew. Because it was just, you know, they sent you these business questions then another set of questions and then they took two months to get back to you, then send you more questions. It's like, look man, do you even know what you're looking for?*".

Overall, different factors that facilitated a negative experience during the program influenced graduates' decision of joining a subsequent accelerator, e.g. the support and communication with the founders at the end of the program seems to have play a role, as well as other discrepancies with the managers. Moreover, some entrepreneurs were under the impression that the program managers were exploiting the startups in order to bolster the accelerator's own image: "*I think a lot of these companies are just trying to build their own brand and fill like their own stats as well. And irrespective if they're on your capital table, even if they're not contributing any value, but you go on to be a success, they can claim that. Yeah, being a part of that success, even though they haven't really contributed to it*."

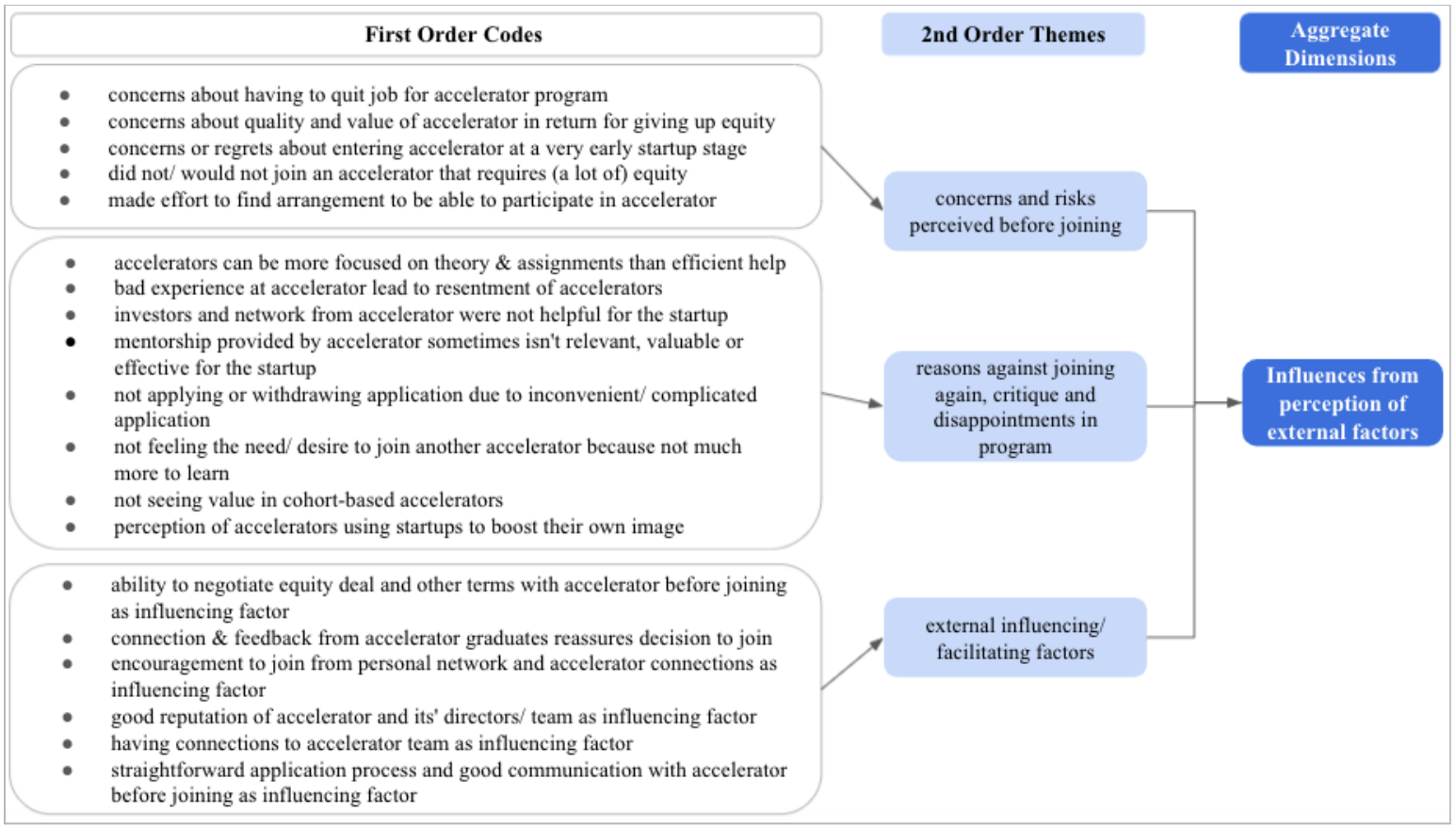

Figure 6b: Data structure showing second aggregate dimension

4.2.3. External influencing/ facilitating factors

The last theme included in this dimension are more direct influences of facilitating factors stemming from external circumstances. For example, as some founders reached out to graduates from the accelerator's previous cohorts, in some cases such positive feedback from the alumni reassured entrepreneurs' tendency to join the program. Also, having an existing connection to i.e. a manager of the accelerator played a role: "*The fact that it came out of my network, as I mentioned before, you know, the director that I knew personally. So I knew a lot more than they advertised with. I kind of already had a lot of insights"*. Moreover, support for this decision coming from outsiders, such as their own personal network was seen as encouragement to move forward with the decision of participating in the program. This was also the case for recommendations from successful industry contacts, or other individuals from their network that the entrepreneur had a trusting relationship with. Aside from encouragement by others, the reputation of the program also had an impact on the decision making. Some indicators for a good quality program were also seen in the difficulty of being admitted to the program, or in the previous successful careers of the accelerator directors or founders: "*It had to come down to the people who ran the program, the program director and the head of the*

program. In Australia, they are two very experienced entrepreneurs. And they gave us a huge level of confidence that they would be there for us through this process. And the people running the program were obviously a big part of it. And that felt right to us, that we were going to be working with the right people".

Lastly, the way in which the accelerator communicates and deals with the entrepreneurs who are debating whether to join the program or not, seems to have influenced this debate as well. For one, being straightforward during the application process and communicating with the entrepreneurs in a becoming manner certainly paid off for the accelerator managers that were trying to recruit founders: "*In terms of Startupbootcamp, they spent a lot of time with us prior to even being selected. They went out of their way to make sure we felt comfortable going through the process, that included meeting us on the weekends, one on one, hearing multiple pitches from us before the election days in some cases. So that was a huge part of it too*". Also, being open to negotiate i.e. the equity deal or other terms also influenced the founders' decision to join in a positive way, as it cleared out possible concerns or risks that the entrepreneurs might have had beforehand. Several founders mentioned that they went into negotiations with the program managers to arrange a lower equity percentage that better fits their expectations: "*So we negotiated quite hard on that and got a better deal. Actually we got improvements twice, so that was quite nice*." Other conditions were able to be negotiated as well due to the accelerator being flexible, such as agreements concerning the combination of a full-time job with the presence at accelerator workshops and other events: "*I had an agreement with these guys, which was different than all the other nine startups since I also have my full time job. So that's why I did not attend all the workshops. I just did a few of them, which were really important. And then I had my teammates attend another part of it*".

4.3. Approach to making the decision

The last of the three central dimensions is that of the entrepreneurs' approach to going about the decision-making. This includes aspects such as in how far the decision was discussed, what was considered and how extensive this process of coming to a decision was. Furthermore, there were differences in the way individual entrepreneurs considered long term factors in their decision or rather focused on the short term aspects of the decision.

4.3.1. Discussions and considerations before joining

The interviewees revealed insights into different debates and thought processes that they went through during the process of deciding whether to join an accelerator program. One central point was the

weighing between the benefits and downsides of this program. For example, the downside of having to pay a fee in order to enter specific accelerators was weighed against the possible learning that could be gained by participating: "*But anyway the cost was a consideration [...]. So I just thought, OK, you know what, the company is not making enough money, it's not a really viable company in this way. Yeah, it's an investment that I can afford. And the outcome is that I learn something*."

As mentioned above, another downside that the entrepreneurs perceived was that of the required equity by the accelerator. However, some founders chose to focus on the positive aspects of the equity deal as well, as they recognized the value of the learnings, network and overall value added as bigger than the equity they would have to give up: "*Now, in return for that, you get to be a part of this three month sort of accelerator process, which they bring experts to the floor. They run a number of workshops, they cover a lot of ground [...]. A lot of pitch practice. They also connect you with potential investors, venture capital firms, angel investors, all local. And they also connect you with their partners, like the banks that make up Dubai fintech ventures for things like running a POC, a proof of concept of your product, and things of that nature. So, you know, a lot of assistance, a lot of guidance, a lot of access to experts, all in return for a six percent stake*".

Before making the decision to participate in the accelerator, some entrepreneurs also considered what alternatives they could access from their surroundings. This especially included alternatives for gaining funding as well as learning. Here the entrepreneurs differed in what alternatives were available to them. For instance, before joining the accelerator, some founders considered raising funds from their family and families, governmental assistance or using their own savings: "*So either we lend money from our parents, family, friends, that's one way, or put our savings or we ask some government help. In this case, we applied for Exist first, which was very popular in Berlin. And of course, we didn't have the complete team at that point. So we didn't get that*". Concerning an alternative way of accessing experts' know-how and learning, the entrepreneurs' university network was also considered as an alternative to the accelerator.

Aside from these debates, founders also tried to think strategically about where to enter such a program, as they perceived considerable differences in the approaches in which accelerator programs operated in different countries: "*But I'm not looking at anything that's less than 100,000 dollars, for example. So mostly these are American accelerator programs. But again, I think it's also very country specific. Like Italy is not very startup oriented. The US, if I was there, I would have definitely done the first round by now, you know, because the mentality is really different*". These kinds of discussions were a lot of the times held with either a co-founder, the team or the advisory board of the company, where the founders were usually met with approval: "*I guess everyone knew what an accelerator is, obviously, and everyone was like kind of willing to do that, especially for six percent of the company with this amount of help*".

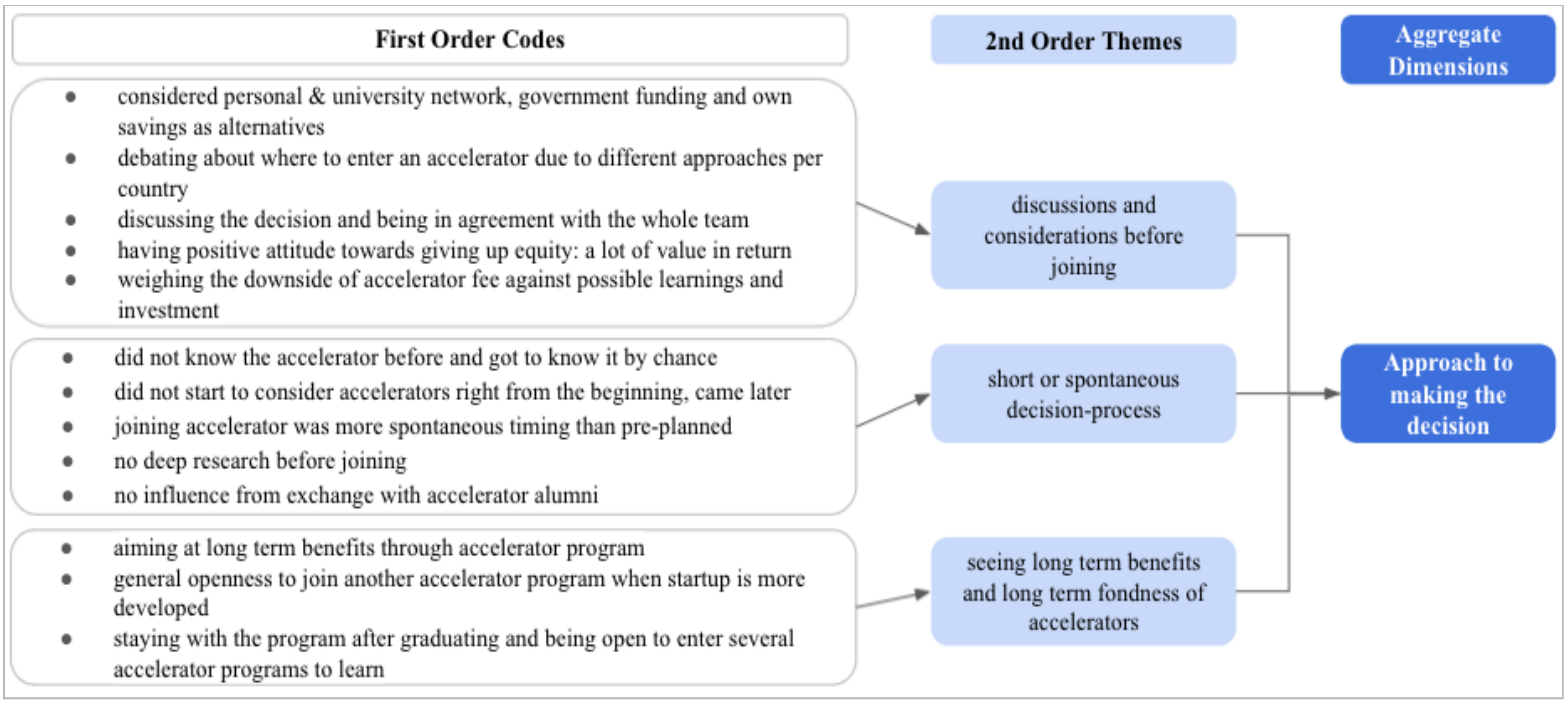

Figure 6c: Data structure showing third aggregate dimension

4.3.2. Short or spontaneous decision process

The second theme arising from the data relating to the decision-making approach is a spontaneousness in the decision making that became apparent through some founders that made the decision to join an accelerator program. It was not always the case that founders mentioned having had the plan to join an accelerator from the early planning of their venture. A specifically convenient timing was more of a factor in the decision-making than planning, as some graduates mentioned that they only started thinking about joining an accelerator shortly before actually doing so. A few founders mentioned that they did not know about the accelerator long in advance and got to know it by chance: "*So yeah, as we started the company and maybe about nine months later, we saw F-lane and we thought, hey, this could be interesting*", therefore implying a spontaneous process rather than a long planned decision: "*And then I found online one program like randomly, so I wasn't searching for an accelerator, but I just found it in my research and that showed me this program [...]. And I just found the test interesting. So I didn't even go on purpose into this program. And they had this program from the Founders Institute and they do this intelligence test. And then you have to describe your idea. And so I was just saying something there and in the end I went through a process and I decided to do this program now*".

Next to spontaneously getting to know the accelerator or having a short decision-process, some participants also expressed a low amount of effort that they put into research before joining: "*So there's not really much accelerators to choose and probably it was just first in-first out you know. I mean, honestly, I didn't do a lot of digging. I think they were first on the list that I found and then just*

applied and then it's success". Furthermore, while some entrepreneurs did somewhat reach out to accelerator alumni in order to have an exchange about the program, this exchange did not necessarily flow into their decision-making process: "*I spoke to maybe one or two persons I can remember. I just wanted to know how was the previous batch and we were actually the second one, [...] and I just spoke to a few people from the first batch. But that was quite a superficial thing, you know, just like, hey, how did it go? Not a deep talk*."

4.3.3. Seeing long term benefits and long term fondness of accelerators

Lastly, founders appeared to show different approaches in the extent to which they included and thought about long term aspects in their decision making process. This stands in contrast to the theme of spontaneousness and short decision making mentioned above.

First of all, some entrepreneurs expressed how they aimed at not only seizing the obvious short term benefits of the accelerator (i.e. funding, learning, growing their network), but also seeing these benefits in a more long term oriented way. For instance, the potential of acquiring investors was considered as also useful for the future, e.g. for future investment rounds. Also with respect to the learnings, entrepreneurs planned on using the basics that they would learn in the accelerator for future businesses as well: "S*o but I decided to enroll in the founder institute because it was more general the program itself. So I thought I could use it in the future times because I'm sure I'm going to start another business. It's just me*".

Similar to this aspect, a few entrepreneurs also showed an openness to joining subsequent programs of the same accelerator, or other accelerators in general, due to their fondness of the program and their preference for continuous learning. For example, some graduates chose to stay with the institution after graduating an initial program: "*And that's why I think I always feel very appreciative of Founder Institute and we are still part of the program, so they have many follow up programs. They truly are supporting the founder, even from zero*". And others were simply fond of the idea of entering programs and gaining learnings from them: "*But I have joined another program before, so I was very open to learn more and to do these programs. So at one point, if it wouldn't have been this program it would have been another program for sure*". Other entrepreneurs also recognized the value which accelerators can bring and which might be better exploited when a startup is past the initial stages of developing their concept and more matured: "*I think once I've done that and I've got a few proof of concepts under my belt, maybe some sort of early stage seed funding, then I'll maybe look at sort of more established accelerators, who can help take me sort of get to round A*".

5. Discussion and conclusion

5.1. Discussion

Following the suggestion of the Gioia method, a Grounded theory model was established based on the data structure that was presented in the previous chapter as part of the findings from the data analysis. As mentioned, the Gioia method is based on the Grounded theory methodology, which aims to propose a theory that has three elements, namely "conceptual categories and their conceptual properties, and hypothesis about or generalized relations between these categories and their properties" (Cassell & Symon, 2004, p. 242). The conceptual categories and their properties according to the Grounded theory methodology are represented in the aggregate dimensions and their Second-order themes, in accordance with the Gioia method (Gioia et al., 2013). In this section, the grounded theory model developed for this study will be presented and explained, following a description of the resulting contribution of the model to theory and practice.

5.1.1. Grounded theory model

As explained in Chapter four, three main dimensions have emerged from the collected and analyzed data, which included interviews with 18 accelerator graduates from around the world. These aggregate dimensions, in combination with their respective subordinate themes make up a theoretical model of influencing factors on the decision-making of entrepreneurs. The model also describes proposed relations between the three main dimensions, which are: i) the role of prior personal and business experiences, ii) influences from the perception of external factors, and iii) the approach to making the decision. In this section, an interpretation of the grounded theory model with respect to the dimensions as well as the relationships between them will be offered.

i) The role of prior personal and business experiences

The first dimension, "role of prior personal and business experiences" represents the effect of factors that stem from personal experiences or experiences in the previous (entrepreneurial) career of the founder on the decision of joining an accelerator program. For example, the motive to join the program in order to gain either funding, learning or growing a network for the startup, ultimately depends on the former personal and business-related conditions that the entrepreneur faced before joining the accelerator. This means that i.e. a lack of accessible funding sources or specific knowledge gaps led founders to decide to join an accelerator program that would compensate for these

deficiencies. Similarly, this dimension also includes the theme of personal factors that facilitated the choice to join an accelerator. Here, a lack of structure, time and focus, which the entrepreneur has personally experienced so far in their life or their journey of creating the startup led them to choose the accelerator in order to make up for these shortcomings. Also, a lack of support from their personal or business-network, such as an unsupportive co-founder, also played a role as these founders saw their participation in the accelerator as an opportunity to work alongside others and therefore feel less lonely in their journey, or as a way of receiving support from the accelerator team. Yearning for these aspects such as support and structure was therefore interpreted to be in relation to the entrepreneur's personal needs and thereby affecting their decision-making.

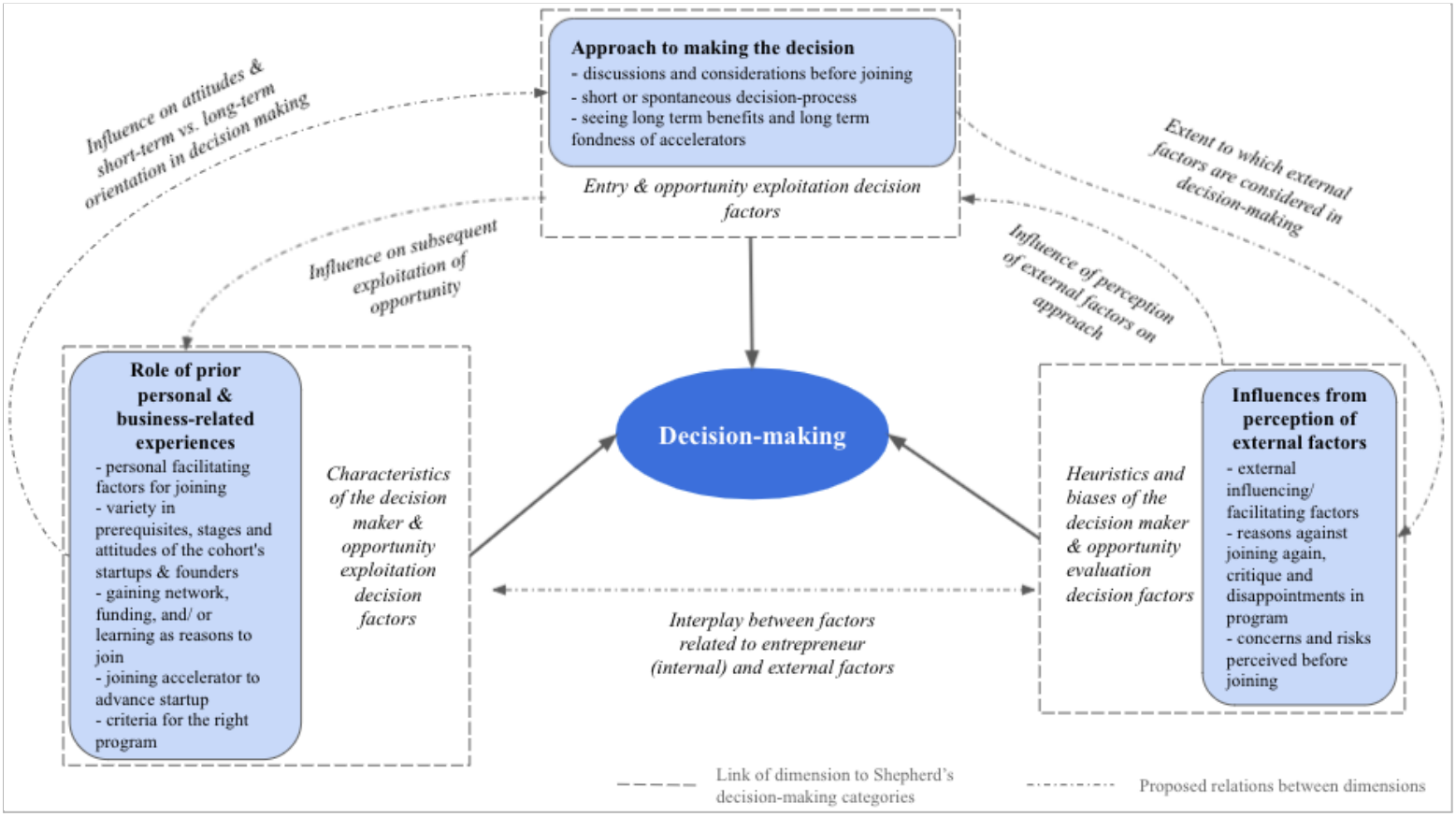

Figure 7: Grounded model of the influencing factors on decision-making of entrepreneurs

Furthermore, the theme of "variety in prerequisites, stages and attitudes of the cohort's startups & founders" also emphasizes that although founders within one accelerator cohort can have substantial differences in the mentioned aspects, exactly these differences in deficiencies (and the resulting needs) created different motives as to why the entrepreneurs decided to join the accelerator. This emphasized the ambiguity of accelerator cohorts and the fact that there is not one specific type of entrepreneur that chooses to join an accelerator.

Looking back at the entrepreneurial decision-making literature discussed in *chapter 2.3*., these themes within the aggregate dimension of "role of prior personal & business experiences" could be linked back to the decision-making factors identified in the extensive research paper on entrepreneurial decision-making by Shepherd et al. (2015) (see *Table 2)*. Specifically, the aspect of the "amount and nature of previous experiences", which was categorized into the category of "characteristics of the entrepreneurial decision-maker" (Shepherd et al., 2015, p. 32 f.) could be of relevance. This factor represents studies on entrepreneurial decision-making which have thematized aspects such as prior startup experience or even self-efficacy as influences on entrepreneurs' decisions. In this case, it is argued that based on the findings, the different motives for joining an accelerator that were mentioned above, stem from the nature and amount of prior personal and business-related experiences. For instance, having no prior startup experience could be a driver for joining an accelerator in order to learn the basics of founding a startup. Therefore, the results of this study show some similarities in content with these decision-making factors identified in Shepherd's study.

Other themes included in the dimension of "role of prior personal & business experiences" are the entrepreneurs' own criteria for the right accelerator program for them to join, as well as the theme of joining the accelerator program in order to advance their business. The latter reflects aspects that are more related to the actual development of the startup in question, such as specific skills for business development (such as the legal and tax system in the target market) as well as confirmation for the viability of the idea in general. For example, entrepreneurs aiming to create a startup in Berlin, mentioned their desire to join a program in the city, as they would learn about topics such as GDPR and taxes in Germany. Similarly, the theme of "criteria for the right program" reflects how different founders, depending on the needs of their startup or their own knowledge, have a different set of criteria for the kind of program they would want to join. As mentioned, this aspect plays a more central role in deciding *which* accelerator to enter (instead of "if"). For example, the industry-fit and location of the program were found to be major factors in the choice of program, as this would promise the highest value-added from the participation in such a program. These criteria also emphasize the entrepreneurs' need for getting as much as possible out of the time spent in the accelerator program and their effort to efficiently exploit this opportunity of being supported in their journey.

With reference to the study on entrepreneurial decision-making by Shepherd, these themes can be related to the factor of "knowledge and experiences" within the category of "opportunity exploitation" (Shepherd et al., 2015, p. 22 f.), as these experiences and knowledge are represented by i.e. the knowledge-gaps that interviewees mentioned as deficits in their startup-knowledge or the criteria for a subjectively valuable accelerator program, which would fit the needs of the startup's current stage and those of the founder. In the study by Shepherd, the amount and nature of previous experiences was regarded specifically in the context of its influence on internalization and externalization decisions. Here it is argued that the decision-making factor of the amount and nature of previous experiences

also has an impact on *how* a business opportunity is exploited (i.e. using an accelerator program or not). In summary, the themes within this aggregate dimension were able to be linked back to two categories identified in Shepherd's study, specifically those of the entrepreneurial decision maker's characteristics, as well as the opportunity exploitation stage. This is also depicted in the grounded theory model, shown in *Figure 7*.

Looking at the research question, which aimed to explore and describe key factors that affected the entrepreneurial decision-making of this choice, it can be said that this study has identified a significance to the role of prior personal and business-related experiences on the decision to join an accelerator program for developing a startup. For one, different drivers to join have proven to arise from the different characteristics of the entrepreneurs as well as those of their startups, as explained above. Furthermore, in the process of thinking about the exploitation of the opportunity to enter an accelerator, different criteria for the right program, as well as specific advantages that the entrepreneurs were after were expressed by them, and these factors were also able to be linked back to their personal and startup-related circumstances at the time of making this decision.

ii) Influences from the perception of external factors

The second dimension in the grounded theory model of influencing factors on decision making, is that of the influences from the entrepreneur's perception of external factors. This dimension represents external factors in the environment of the entrepreneur making this decision, as well as their perception of these external circumstances, which in turn, affect their decision making.

Firstly, the theme of external influencing or facilitating factors, which emerged from the data analysis, shows positive influences on the decision through several aspects. One central aspect comes from entrepreneurs' communication with e.g. accelerator managers, graduates or their personal network, such as successful industry contacts. This often had a reassuring function for the entrepreneurs during their decision making and further encouraged them to join the program. As shown in the findings, some risks were perceived by the founders concerning the idea of joining an accelerator, i.e. looking at the program quality. In this case, it has become apparent during this study, that a good reputation of the program made the decision seem less risky and posed as further reassurement. Also, the factor of straightforward and positive application and communication processes with the accelerator managers positively influenced applicants' decisions to continue with their application and eventually join the program.

In contrast to this theme, the dimension also includes entrepreneurs' reasons against joining a subsequent accelerator, as well as critique and disappointments in the program. It should be noted that this theme also reflects the influences on a decision that took place after the founder decided to join an accelerator and is therefore interesting as it might be somewhat comparable to the attitudes that could have led other entrepreneurs to the decision of not joining an accelerator program in the first place.

Here, aspects such as the perception of a low value-added from the program compared to the time and money invested in the participation played a central role in the graduates' overall perception of this type of program and whether or not they find them worth joining. Additionally, feelings of disappointment or exploitation were also mentioned as reasons why some founders subsequently had a negative perception of accelerators in general and wrote off the concept as a whole.

The two themes of external facilitating factors, as well as "reasons against joining again, critique and disappointments in the program" were also able to be related to the previously discussed literature on entrepreneurial decision-making. In *section 2.3.1*., the aspect of heuristics and biases as research topics in entrepreneurial decision-making literature has been discussed, where researchers have related these phenomena to entrepreneurs, due to the high level of uncertainty that they have to face. This uncertainty evidently also applies to the decision at hand, where founders are trying to determine whether joining an accelerator will be beneficial for them or not. Due to the high level of uncertainty in their situation, research has emphasized the weight of heuristics and biases in the decision-making of entrepreneurs (Busenitz & Barney, 1997; Shepherd et al., 2015). Based on the results of the data analysis in this study, it is therefore argued that positive external perceptions such as good communication and negotiations, a prestigious program reputation, and encouragement and reassurance from others were heuristics and biases that the respective entrepreneurs relied on during their decision-making when joining the program. Similarly, bad experiences during the program such as the feeling of being exploited, or not perceiving the program as valuable biased the graduates in a way that they perceived accelerators as invaluable or overall a bad idea in their future considerations. Therefore, these themes within the dimension of "influences from the perception of external factors" were related back to the decision factor of "reliance on heuristics and existence of biases" identified by Shepherd et al. (2015, p. 30).

Another theme categorized within this dimension is that of "concerns and risks perceived before joining". Here, especially the aspects of concerns about having a full-time job next to the program, and the required equity deal were focal points and consequently affected the decision-making. For example, if a founder was able to reduce their work hours, or arrange only a partial attendance at the accelerator program sessions, this mildened their concerns and reassured their decision of joining the program. Furthermore, the required equity (and sometimes IP rights) by the accelerator turned out to be a significant influencing factor, as some entrepreneurs rejected a participation in programs where these deals were not in their favour or expressed how they would not agree to such a deal in the future. Shepherd's definition of the entrepreneurs' perception of environmental conditions as an entrepreneurial decision-making factor, categorized into the category of the opportunity assessment stage, poses as an appropriate literary reflection of this finding, as this decision-making factor includes environmental (or external) conditions such as uncertainty and market conditions. One example of the similarities between this study's findings and the research on entrepreneurs' perception of environmental conditions and the impact on decisions is shown in a study which discussed how a

higher perceived uncertainty in the entrepreneur's situation leads to a lower willingness to act on a specific entrepreneurial opportunity (McKelvie et al., 2011). This lower willingness to act can be applied to the context of this study in the sense that the entrepreneur will hesitate about moving forward with their startup development on their own and rather opt to enter an accelerator program, which would help them minimize some risks and receive more support. As one interviewee expressed, the accelerator would thereby help them "*de-risk*" the venture. The factor of the entrepreneurs' perception of environmental conditions can therefore be related to the concerns and risks that the entrepreneurs perceive when trying to decide whether they should participate in the accelerator or not.
In summary, the dimension of "influences from the perception of external factors" reflected external facilitating factors and downsides perceived by the entrepreneurs, which created certain biases in their decision-making, as well as concerns and risks that they perceived while making this decision, which stemmed from their perception of the external conditions. Therefore this dimension was put in relation to two of Shepherd's identified decision-making factors and placed this dimension into a category that synthesizes both factors, which are the heuristics and biases of the decision-maker, and opportunity evaluation decision-factors (see *Figure 7*). Looking at the research question of this study, these results imply that the perception of external factors such as concerns, risks, drawbacks and facilitating factors of the situation, had a considerable effect on the decision-making of entrepreneurs when they were trying to make the decision in question. This shows the importance of not only personal or business-related factors (as discussed before) but also the weight of external influences on entrepreneurial decisions.

iii) The approach to making the decision

The last dimension included in the grounded theory model is that of the entrepreneurs' approach to making the decision. As explained in *section 4.3*., this dimension is made up of factors such as short-term versus long-term considerations of entrepreneurs in their decision-making process, as well as the considerations and discussions that were deliberated at the time of making the decision. Short-termism and spontaneousness became apparent through many entrepreneurs' revelations about a low amount of research before deciding to join, about not knowing these programs long before joining them, or through emphasizing that the timing 'was just right' at the time of making this decision. In contrast to this short-term thinking, other entrepreneurs revealed how they aimed at using the accelerator for a sort of life-long support, as they would be able to use the learnings or even the investor network gained in the program in the future. Long-termism was also reflected in some founders' openness to include the option of subsequent accelerators in their plan for their venture development in the future and planning this step long ahead. Thus, these two themes together, reflect a difference in decision-making approaches, which in turn influenced the decision-making of

entrepreneurs. Interestingly, it should be noted that it seems as though both approaches to coming to this decision were eventually able to lead to the same decision (choosing to join the program). This implies that the extent to which the decision is planned beforehand does not affect the outcome of the decision, but rather only influences the process of making the decision.

Shepherd et. al (2015) identified the extent to which entrepreneurial decisions are planned as a decision-making factor in the category of the opportunity exploitation stage. Research found that "planning helps entrepreneurs evaluate alternative courses of actions" (Shepherd et al., 2015, p. 22), while other studies i.e. criticize the value of planning via business plans. The mentioned themes can be related to this decision-making factor in the sense that the two different approaches identified within this study further fuel the divisiveness in research about the value of business planning for startups (Shepherd et al., 2015), as well as emphasize the diversity of the attitudes and characteristics of founders within one accelerator cohort. Therefore, if one considers the participation in an accelerator as a part of the opportunity exploitation stage, the findings of this study have expanded how planning was considered in the process of venture creation by adding a new context to the field.

The last theme in this dimension is that of "discussions and considerations before joining". One central aspect of this theme is the weighing between benefits and downsides of joining the program in terms of i.e. the accelerator fee or equity deals versus possible value gained from the program. Furthermore, entrepreneurs also tried to think strategically in their decision-making and considered alternatives to joining as well as differences between accelerators in different locations. Here, it is also important to mention that this approach of weighing good and bad aspects against each other was most often combined with discussions with e.g. co-founders or the advisory board of the business. In the category of decisions concerning entrepreneurial entry, Shepherd et al. (2015) included studies, which have thematized differences in entrepreneurs' use of decision-making tools or techniques in their decision-making. For example, the direct or indirect use of systematic search was studied, where especially the use of indirect systematic search (founders relying on their network for information) (Patel & Fiet, 2009) can be applied to the findings in this study. This is due to the finding, that in their decision of whether to join the accelerator program or not, entrepreneurs have repeatedly expressed how the discussions with their team, co-founder, advisory board or personal network have been used in order to help them arrive at the decision that would be best for their startup, which is in line with the concept of indirect systematic search. Furthermore, making use of approaches such as the weighing of upsides and downsides against each other, as well as strategic planning can be linked back to the idea of decision-making techniques as well. Therefore this theme was able to be related to the decision-making factor of using decision-making tools and techniques, identified in the paper by Shepherd et al. (2015).

Summarizing the link between the dimension of "approach to making the decision" and the literature on entrepreneurial decision-making, it can be said that the themes in this dimension showed a relation to the decision-making factor of planning, as the results showed differences in the extent of

spontaneousness versus long-term orientation, as well as the factor of using decision-making techniques and tools, in this case, reflected through the way in which entrepreneurs have shown to use different techniques and their network to come to a decision on entering an accelerator with their startup. With respect to the research question of this study, which aimed to explore and describe key influencing factors on the decision-making of entrepreneurs thinking about joining an accelerator, it can be said that the dimension of the approach of coming to this decision has emphasized differences in the entrepreneurs' process of arriving at this decision and how some entrepreneurs made this decision in a rather spontaneous way with a low amount of planning and research, some others have taken a different approach and expressed more thought and effort in their process of arriving at this decision. Furthermore, it was emphasized how different approaches and mindsets can lead to the same decision outcome, which implies the importance of other factors, such as the other two dimensions of the grounded theory model, on the decision-making of entrepreneurs.

5.1.2. Proposed relations between the dimensions

In the previous *section 5.1.1.*, the three main dimensions that emerged within the data analysis of this study and which are represented in the grounded theory model (see *Figure 7*) have been explained and the link between them and existing entrepreneurial decision-making research has been established. In this section, the proposed relations between the dimensions of the model (illustrated in the figure through the arrows between the dimensions) will be discussed.

i) Role of prior personal and business-related experiences - Approach to making the decision

The first two dimensions to be examined are related in two ways. Firstly, this study proposes a relationship between the role of prior personal and business-related experiences and the approach, which an entrepreneur takes in decision-making. Specifically, it is argued that these experiences, which were gathered in the previous life of the entrepreneur up until this moment, have an effect on the approach that is taken in decision making. As mentioned in *sections 4.1* and *5.1.1.*, as well as in decision-making literature (Shepherd et al., 2015), it has been established that the entrepreneur's conditions at the time of decision making influence the decisions they take. Here, it is proposed that previous personal and business-related experiences affect attitudes in general, as well as aspects such as the short-term vs. long-term orientation of an entrepreneur. For instance, being more spontaneous when making decisions could be a result of i.e. internal confidence that came from previous successes which therefore leads to a more positive and risk-taking attitude.
The role of different levels of experience and resource availability of an entrepreneur was already discussed in previous sections. It could be that an entrepreneur who already acquired founding

experience or already possesses some resources such as funding or a network, is more spontaneous in their decision to join a startup accelerator and adopts a "what's the worst that could happen" mindset. In contrast, a different, first-time entrepreneur who has scarce resources, no experience, or other attitudes could be more careful, consider long-term effects, do more research and consider other alternatives before making their decision.

A more positive attitude in general, stemming from prior personal life experiences, could also facilitate the fact that factors such as an equity deal, which evidently was a highly controversial topic for entrepreneurs in accelerators, could be viewed more positively. For example, some interviewees expressed how they also saw benefits and opportunities in the equity deal and did not understand the frustration of other founders in their cohort. In subsequent discussions with team members, such an attitude could influence the discussion in a way that the risks or drawbacks of this equity deal are perceived in a less threatening way and thereby lead to the decision of joining the accelerator program despite this condition.

Looking at the relationship of the two dimensions from the other perspective, there is also a proposed influence of the decision-making approach on the subsequent way in which the opportunity is exploited. As discussed, entrepreneurs showed both short-term and long-term orientation in their decision-making, and also expressed the way in which they dealt with discussion points and considerations within their decision-making process. It is argued here, that when the decision of joining is less thought through and more spontaneous, this could lead to a different way in which the founder extracts value from their participation in the accelerator program. For example, putting more effort into conducting research about the program could offer the entrepreneur more information about how they might get the most value out of the program for themselves and their business, or could lead to a better fit between the program that is joined and the characteristics of the founder and business. This includes i.e. research on the kind of mentors that will be present, the investment deals that can be realised through the investors facilitated by the program, the contacts that can be gained for their business network, or specific skills that can be learned during the program. Furthermore, some entrepreneurs expressed how they entered the program intending to use the learnings or even the investor network for the future of their startup (subsequent funding rounds) or even for other projects. Therefore it is proposed that a shorter and more spontaneous decision that is less researched could lead to less efficient exploitation of the opportunity that is entering an accelerator program.

ii) Approach to making the decision - Influences from the perception of external factors

Looking at the dimensions of the approach to making the decision and that of influences from the perception of external factors, two relationships are proposed. For one, it is argued that the entrepreneur's approach to decision-making influences the way in which external factors are considered in the process of making the decision. Similarly to the point mentioned above, a more

short-term or long-term oriented mindset could affect in how far external factors, such as concerns about the quality of the program, or the fit between the startup's stage and the design of the program are included in the decision-making of entrepreneurs as a shorter or more spontaneous decision could lead the entrepreneur to disregard these external aspects. In contrast, a more long-term oriented mindset and approach could perceive additional factors and consider them in the decision making process. For example, some entrepreneurs revealed how the external facilitating factor of a good reputation of the program made them choose to join it. However, some founders gave this aspect even more weight, when they revealed their strategic thinking behind graduating from such a prestigious program, as they thought that this would give them and their startup more credibility and therefore be beneficial to them and their presence in the market.

Looking at the other side of this relationship, an influence from the perception of external factors on the decision-making approach is proposed as well. Here, the aspect of biases plays a role, which was also the linkage of this dimension to entrepreneurial decision-making literature. This is due to the fact that perceiving external factors as more or less risky could affect the approach that is taken when making this decision. For instance, perceiving external circumstances such as the market or accelerator-specific aspects as more risky could affect the approach to making the decision in the sense that the entrepreneur could be more careful, do more research or have more in-depth discussions with their team before making a decision. Similarly, if the entrepreneur perceives less, or no risk to the situation and recognizes mostly upsides to the idea of this program, the decision-making approach could turn out to be much more spontaneous and short as the downsides are much less prevalent.

iii) Role of prior personal and business-related experiences - Influences from the perception of external factors

Finally, a relation is proposed between the two dimensions of the role of prior personal and business-related experiences and influences from the perception of external factors. Here, an interplay between the two dimensions is proposed, as depicted in the grounded theory model in *Figure 7*. This relation is based on the observation that both the perception of external factors and circumstances, as well as factors related to the entrepreneur and their business (which will be referred to as internal factors in this section) influenced their decision. These two dimensions are difficult to separate, which is the reason for the assumption of an interrelation between them.

On the one hand, it could be argued that prior personal and business-related experiences, which lead to different motives, attitudes and needs influence the entrepreneur's perception of external factors. This is because i.e. specific concerns or external risks that are perceived could be stemming from prior experiences that a founder gained. For instance, the concern of giving up a full-time job in order to participate in the program could be based on prior experiences in the job market which lead to the individual's preference for job security. Furthermore, as an entrepreneur's criteria for an accelerator

program to be joined can be founded on prior experiences, the perception of external conditions around a program that meet exactly these criteria could create a driver for the entrepreneur to decide to join the program. This could also be applied to further circumstances of the founder or their startup, which influence their perception of external circumstances.

On the other hand, it could also be argued that external factors and their perception influences certain aspects of the internal (entrepreneur- and startup related) factors. For example, the perception of external facilitating factors, such as a good quality program, could affect entrepreneurs in the sense that they subsequently assess the program as a good opportunity to satisfy specific needs they had for developing their business. For instance, an entrepreneur who is seeking to advance their startup and acquire specific advantages from the participation could be positively influenced by perceiving external conditions as positive, such as the encouraging reinforcement from the accelerator managers or a good reputation of the program. Similarly, a founder who, due to their prior personal experiences, is looking for more support in their journey to founding their startup, could also be positively affected by experiencing a pleasant communication with the accelerator team as well as good negotiations and conditions as facilitating factors to join this program. In contrast, if specific experiences have created a situation for the entrepreneur where certain criteria for joining such a program have emerged as a result, the perception of the accelerator program not exactly fulfilling these criteria could also have an effect on the entrepreneur's decision making.

As influences from both dimensions on each other were able to be argued for, an interrelation between the two dimensions of the role of prior personal and business-related experiences and influences from the perception of external factors is proposed in this study.

5.1.3. Typecasting the entrepreneurs who joined an accelerator

After analysing the data collected from the batch of entrepreneurs who joined accelerator programs and developing the grounded theory model and propositions, it became apparent that some of the decision-making factors and characteristics were similar for a number of participants. Therefore, it was subsequently analysed in how far a typology of accelerator joiners could be proposed within the context of this study. The main determining characteristic used to distinguish the types of accelerator joiners was the sort of experience that the entrepreneurs had at the time when they were making this decision. The two forms of experience are prior startup experience, as well as prior experience in the industry of the (new) startup. This segmentation allowed three types of accelerator joiners to be distilled from the data: i) those with prior experience both in starting a business, and in the respective industry, ii) those with prior startup experience but entering a new industry with their new startup, and iii) those with no startup experience but with prior work experience in the industry.

Using the grounded theory model of influencing factors on the decision-making of entrepreneurs created in this study, the three joiner types were analysed along the expression of their

decision-making approach and the extent to which they perceived their external environment or situation as risky (and therefore found many concerns during their decision-making process). In addition to these dimensions, the three joiner types were also analysed and distinguished along the lines of the type of resources that they were looking to acquire during their participation in the program, as this dimension is also a valuable implication about the reason as to why the different types of founders joined the program. *Table 7* shows an overview of the developed typology and *appendix C* includes the background data that was used to develop the typology.

	Type 1: 'The experts' Startup - and industry experience	**Type 2: 'New industry entrepreneurs'** Startup experience, but no experience in that industry	**Type 3: 'First-time founders'** No startup experience, but work experience in that industry[16]
Number of interviewees	3 (17%)	4 (22%)	11 (60%)
Decision-making approach/ orientation	All long-term oriented in their decision-making approach	Mostly short-term oriented and spontaneous decision	Almost evenly split between long- and short-term oriented
Perception of external risks/ extent of concerns regarding decision	Mostly perceived no, or low amount of risks and concerns	Half of them perceived no, or low risks and the other half perceived a medium amount	Long-term oriented had a higher tendency to perceive more risks and concerns, short-term oriented tended to perceive that less
Resources sought in accelerator	Diversity in the resources needed	All looking for a network and know-how about the new market, most of them also looking for funding	Tendency for pattern: long-term oriented founders all sought network expansion, while funding and knowledge acquisition prevailed for short-term oriented group

Table 7: Typology of accelerator-joiners

Type 1: The experts

The first type of accelerator joiners was able to be distinguished from the others due to their high amount of experience. Specifically, these founders had experience in founding a startup before entering the accelerator in question, as well as experience in the industry that they were creating the current startup in. All of them showed a long-term orientation during their decision-making of joining the accelerator program. For one, all of them conducted somewhat diligent research on the program before joining: "*I just wanted to know how was the previous batch and we were actually the second one, I think so there was only one batch before us if I'm not mistaken. And I just spoke to a few people from the first batch*". This implies how this type of joiners wanted to make sure that they were

[16] Except for one case, where the participant did not have experience in that industry either.

spending their time in an efficient way. Also, for this type of founders, the decision to join the program was part of a bigger long-term strategy, such as their funding strategy. One participant who can be described as a serial entrepreneur also aimed at using the learnings from the program for their future endeavors, as they were sure that they would start another business in the future: "*I decided to enroll in the Founder Institute because it was like more general the program itself. So I thought I could use it in the future times because I'm sure I'm going to start another business. It's just me.*"

The fact that these founders conducted significant research before joining the program and somewhat planned this decision beforehand also goes hand in hand with another commonality that the founders of this type have. It has become apparent that these founders were very sure of their decision and perceived no, or only minimal downsides and risks to joining the accelerator program. This could be because they are generally more confident as founders due to their significant amount of experience: "*No, we didn't have any risks. We just wanted to get out there. We were so sure, having both been working in drones. We were so sure about this use case*". The feeling of safety could also be due to the amount of research they have conducted before deciding to join, which reassured them in their decision. The latter argument is also in line with the third proposition (see *section 5.2.2*.), which proposes that a long-term oriented mindset will lead to the perception of less risks and concerns in the decision making.

In terms of the motives for joining, this group of founders showed very mixed reasons for joining and there was no clear pattern among them in terms of the resources they were looking to acquire through joining the accelerator, be it to acquire funding, grow their network or gain more knowledge in a specific area. It is also noticeable that this type of joiners were mostly looking for one or two types of resources from the accelerator, compared to other types of entrepreneurs who were looking to achieve more goals during the accelerator: "*So the primary reason to join Founder's factory was to raise capital. That was the only reason we joined*". Therefore these entrepreneurs already had a clear idea about what exactly they needed for their business and where to find it.

Type 2: 'New industry entrepreneurs'

The second type of accelerator joiners found in the data is that of entrepreneurs who had already gathered the experience of founding a business, but were entering an industry in which they have not worked before: "*[..] My co-founder and I at that time had had a previous startup. So we knew generally how to go about that process. But again, we didn't know how to do that in the energy landscape. And that's when we started looking for what other innovation is happening in the energy industry. And then we just happened to come across lots of accelerators and we decided that would be worth pursuing*." Their decision-making was mostly characterized as a short-term approach and spontaneous decision making, which could be traced back to their prior experience in founding businesses, resulting in more confidence. An exception was found for one member who took a more

careful and planned approach, and who had considered joining an accelerator for a long time and conducted a significant amount of research during the time of coming to this decision. In this case, the entrepreneur was also affected by a negative prior experience with an accelerator, where the founders felt exploited due to the demanding conditions of the program (such as intellectual property rights and a high percentage equity deal). This led to a more careful approach when deciding to join a different program and a very diligent prior research process and this finding is also consistent with the first proposition, which proposes that prior personal and business-related experiences affect the decision-making approach (see *section 5.2.2*.).

The accelerator joiners were not coherent in the extent to which they had concerns or perceived the situation around them as risky. It should be noted, that out of the four founders within this type, the two male ones perceived a low amount of risk and concerns, while the two female founders were the ones who had more concerns regarding their knowledge gap in the new industry, or regarding their unstable income during the time when they would away at the program. This implies a difference between genders and their risk perceptions during decision-making, which has also been the topic of research studies in the past (Langowitz & Minniti, 2007).

Looking at the type of resources that these founders who had startup experience but no industry-specific experience were looking for, the group showed that all of these founders were seeking to expand their network in the new industry that they were entering, as well as to acquire the relevant know-how from industry experts within the program in order to succeed at their new market entry: "*And my decision in this was to get the broad, specialized knowledge and connections and have all these mentors around, even if I'm an experienced serial entrepreneur*". Raising funds was also a common pattern for most of these entrepreneurs, except for one case, in which the founder was still at a very early stage of developing the startup and was not looking to raise capital at a stage this early.

Type 3: 'First-time founders'

This type of accelerator joiners was by far the most common type found in the sample of this study, and also the most diverse group among itself. These founders had no prior startup experience and were therefore first-time entrepreneurs, however they came with work experience in that industry due to having previously worked in the market in which they were now starting a business: "*I've also implemented Global HR systems, Oracle SAP, but doing it on our own, we don't have that experience. We might know bits and pieces, but we don't have a lot of experience in this particular domain."* Only in one case, the entrepreneur was not only a new founder, but also new to the industry that they were creating the venture in. Interestingly, this batch of entrepreneurs were (almost) all creating tech-related businesses, which signifies how many entrepreneurs choose to start tech-related ventures and also explains the higher diversity of this group due to a higher number of entrepreneurs belonging to it.

This group can be divided into two sub-groups; those with a long-term approach and those with a short-term approach or more spontaneous mindset during the decision-making process. The long-term oriented group tended to conduct a higher amount of research before deciding to join and also considered more factors in their decision-making. Oftentimes these founders had concerns stemming from their personal life, but were also unsure about the outcomes of joining the program and if it would be an efficient use of their time compared to the help they would receive through the accelerator. However it should also be noted that the first-time founders type showed the highest number of entrepreneurs who perceived more concerns and risks regarding the accelerator program compared to the other two types. An explanation for this pattern could be that this type of entrepreneurs were not part of an entrepreneurial ecosystem before, and therefore the whole concept of accelerators and founding a business in itself could seem more risky to them compared to accelerator joiners who came with prior startup experience. In terms of the resources they needed, all long-term oriented first-time founders were especially looking to expand their entrepreneurial network during the program, not only in terms of mentors, but also in terms of getting the chance to co-work with members of the accelerator cohort and growing their entrepreneurial network: "*I think subconsciously I was kind of seeking out just other people that I could work alongside and he could help me cause I was slowly losing my mind there trying to figure everything out by myself* ". Most founders in this subgroup were also looking to raise capital, except for one deviating case, where the founders already had some initial funding for the startup.

The other subgroup, short-term oriented new entrepreneurs, showed a pattern of tending to perceive less risk and concerns around their situation in comparison to the long-term oriented group. As many of these founders expressed how they joined the program because 'the timing was right', it seems probable, that such first-time founders who are not experienced with startups and that take a short time deciding on joining this type of program, could unintentionally disregard some factors that should be considered during such a decision, as they do not have the expertise to reach the decision in a short timeframe while still considering all relevant aspects of the decision. Furthermore, the short-term oriented first-time founders were not aiming at expanding their network through the accelerator, but most of them rather focused on tangible resources that bring quicker results, such as funding and startup know-how: "*I did not need the fashion connections because I already work in that industry [..]. The only thing, like I said I was missing was the money and the visibility.*"

5.2. Conclusion

This section will begin with a summary of the findings of this study and thereby provide an answer to the central research question that was developed for this research investigation. Subsequently, the contribution of this study in regards to the respective academic as well as practical field will be illustrated.

5.2.1. Findings and answer to research question

i) Summary of the findings

The objective of this study was to explore and describe key factors that influenced the decision-making of entrepreneurs' choice to participate in a startup accelerator program in their effort to develop their venture. In order to acquire a deep understanding of what factors influenced this decision, semi-structured expert interviews were used to uncover these underlying aspects, as this data collection technique would facilitate the emergence of new knowledge from conversations with individuals who have experienced the phenomenon in question first hand.

Furthermore, as the Gioia method was chosen for conducting the data analysis, semi-structured interviews posed as an ideal foundation for the subsequent analysis, which was also advertised for by the authors of the Gioia method. This is because the Gioia method aims to provide a data analysis that can help discover emergent theoretical models based on the data, and functions as a way to conduct rigorous inductive research by following a number of steps that ultimately help the researcher arrive at a model of grounded theory (Gioia et al., 2013).

The sample of this study consisted of 18 accelerator graduates, who have participated in different accelerator programs worldwide, and these programs included in the study were selected based on a list of criteria for the definition of startup accelerator programs. This was done due to the fact that a myriad of different accelerator program designs exists, which makes a coherent definition of the concept difficult. By selecting programs on the basis of specific program design factors (such as a cohort-based design and a limited program duration), the risk of having accelerator graduates from incoherent programs (and thereby obtaining inconsistent results) was mitigated. The interviews were processed in a procedure consistent with the Gioia method, which resulted in three aggregate dimensions, namely 1) the role of prior personal and business experiences, 2) Influences from the perception of external factors, and 3) the approach to making the decision. These dimensions and underlying themes were subsequently related to extant theory on entrepreneurial decision-making and thereby a grounded theory model was developed (see *Figure 7*), including propositions about the relations between the three core dimensions.

The first dimension represents differences in prior personal experiences as entrepreneurs or as individuals, as well as experiences in their prior career that led to very different situations, attitudes, and prerequisites, which in turn affected the decision making of the founders. This dimension includes themes such as personal facilitating factors for joining, the entrepreneurs' criteria for the right program to join, the motive of joining an accelerator to advance their startup, the variety in prerequisites, stages and attitudes of the cohort's startups, and the theme of gaining funding, a network, and/or learning as reasons to join the accelerator. This dimension was able to be linked back to entrepreneurial decision-making theory, specifically to two entrepreneurial decision-making factors which have emerged in prior research, namely those of the entrepreneurial decision maker's characteristics, and the opportunity exploitation stage (which is also depicted in the grounded theory model).

The second aggregate dimension exhibits influences that arise from the entrepreneurs' perception of external factors, which can be related to the accelerator program, the situation as a whole, or other external circumstances. This dimension includes themes such as external facilitating factors, reasons against joining an accelerator again (due to critique and disappointments in the program), and concerns and risks that the entrepreneur perceived before joining. With respect to the extant entrepreneurial decision-making literature, this dimension was related to two specific factors, namely that of heuristics and biases of the decision-maker as well as opportunity evaluation decision-factors.

Lastly, the dimension of the entrepreneurs' approach to decision-making emerged as a focal point from the data as well. This dimension represents how the decision was achieved, showing i.e. the discussions that the entrepreneur held with other individuals, as well as factors of consideration and how extensive the process of coming to the decision was, such as long-term versus short-term approaches. The themes included in this dimension showed a few similarities in content with decision-making factors identified in prior literature, namely the factor of planning, which relates to the finding of differences in spontaneousness versus long-term orientation of entrepreneurs, as well as the factor of decision-making techniques and tools, used i.e. through gathering information from individuals within the entrepreneur's network or other decision-making techniques.

ii) Propositions in the grounded theory model

In developing the grounded model of the influencing factors on the decision-making of entrepreneurs, a series of propositions were developed, which shall illustrate the dynamic relation between the three emergent dimensions. The following five propositions were developed[17]:

1) It is proposed that prior personal and business-related experiences influence the approach to making the decision. Specifically, it is proposed that the conditions of entrepreneurs at the

[17] A more detailed argumentation for the propositions can be found in section 5.1.2.

time of decision making are formed by previous life experiences, and therefore previously acquired personal and business-related experiences influence not only current attitudes but also aspects such as the approach that is taken during decision-making (short-term versus long-term orientation) by an entrepreneur.

2) An influence from the decision-making approach on the subsequent nature of opportunity exploitation is proposed, which was linked to the dimension of prior personal and business-related experiences. Based on this study, it is argued here that the extent to which the decision is made with a more short- or long-term oriented mindset influences the value and efficiency of how the opportunity is subsequently exploited.
3) The entrepreneur's approach to decision-making is proposed to have an influence on how external factors, such as concerns, risks, or advantages are taken into account during the decision-making process. Specifically, it is argued that i.e. a more spontaneous approach or a short decision-making process leads to the disregarding of some aspects of the decision to be made, such as risk factors present in the market or concerning the accelerator program to be joined.
4) The fourth proposition is concerned with the counter-relation of the mentioned dimensions and suggests an impact from the perception of external factors on the decision-making approach. The argument here is that external factors are perceived differently by entrepreneurs due to their existing biases and that this leads to different approaches to decision-making which are i.e. more or less spontaneous or thought through, depending on the entrepreneurs' perception of the external environment. Differences in the external perception can be e.g. in regards to the risk perceived around the market situation or accelerator-specific aspects, as some entrepreneurs may perceive the environment as more or less optimistic and 'safe' than others.
5) Lastly, an interrelation between the role of prior personal and business-related experiences and influences from the perception of external factors is proposed. The two dimensions were revealed to have an impact on the entrepreneurs' decision-making and the two concepts were found to be difficult to be detached from one another. For one, prior experiences are argued to lead to different needs, motives and attitudes, resulting in an influence on the entrepreneur's perception of external factors. On the other hand, it is proposed that the way in which external factors are perceived (e.g. quality of the program) is in interplay with prior internal experiences that result in specific entrepreneurial needs, which in turn affects the opportunity exploitation decision.

iii) Typology of entrepreneurs who join accelerators

In addition to the grounded theory model of influencing factors on the decision-making of entrepreneurs and the above mentioned propositions, a typology of the types of entrepreneurs who chose to join accelerators was developed. Three main types were able to be distilled: i) those with prior startup - and industry experience, ii) those with prior startup experience but no relevant industry experience, and iii) those with no startup- or relevant industry experience. The three types showed differences in how they approached the decision-making process, how they perceived their external environment and situation, and which resources they sought from their participation in the program (see *Table 7*).

While type one ('the experts') showed a more planned, and long-term oriented mindset while coming to the decision of joining the program, they were also more confident regarding their situation and felt that their environment posed no particularly high risks. This group of founders was very diverse in the types of resources they aimed to gain from participating, which shows how each of them had specific goals for their startup development in mind. In contrast to this group, the 'new industry entrepreneurs' (type two), were mostly short-term oriented and made the decision to join the accelerator rather spontaneously. This group showed a variety in their external perception, which was able to be traced back to the gender distribution within the group. Moreover, all of the new industry experts were looking for know-how and connections in the new market that they were entering through the accelerator. Finally, the largest group was made up of the third type of accelerator joiners, the 'first-time founders', who were split into two subgroups regarding their decision-making approaches. While the long-term oriented first-time founders were more concerned about external factors during their decision-making and were mainly aiming to expand their network during the accelerator, the more spontaneous subgroup perceived less risks and tended to be rather looking for funding and learning.

iv) Answer to the central research question

At the beginning of this thesis, it was argued that there exists a knowledge gap concerning entrepreneurship research and the phenomenon of startup-accelerators. Specifically, it became apparent that there is a lack of research on this topic and that extant literature has so far only investigated it from similar perspectives. Considering the increased significance of startup accelerators in entrepreneurial ecosystems, and the fact that we do not yet understand the phenomenon from the perspective of entrepreneurs who chose to join such a program, this study aimed to answer the following research question: "What factors influence the entrepreneurial decision-making of the choice to join an accelerator during the venture development phase?". The goal was to explore key decision-making factors and describe them to illustrate which aspects influence this entrepreneurial

decision. The Gioia method was used in order to arrive at an in-depth data structure (*see Figures 6a,b,c*) as well as a grounded theory model (*see Figure 7*). The data structure and model include the aggregate factors that were identified as influences on the decision of choosing to join an accelerator and thereby offer an answer to the research question of this study.

The above-mentioned research question was able to be answered in a way, where three main dimensions that describe the key factors of this decision were distilled from the data and put into relation to each other. First, this study discovered that prior personal and business-related experiences played an important role during this decision of choosing to participate in an accelerator program. These previous experiences in their personal life and career led to different characteristics of the entrepreneurs and their startups and therefore different drivers to join such a program. Also, these personal and startup related characteristics developed from previous experiences were the reason for the existence of program-specific criteria for the accelerator to be joined or specific advantages that founders were hoping to acquire.

The second factor that was identified as a key influence on this decision, is that of the impact of the entrepreneur's perception of external circumstances. The results of the in-depth interviews with accelerator graduates implied that the way in which they observed external aspects such as risks, concerns, drawbacks and advantages considerably affected their decision-making. Here, aspects such as the entrepreneur's existing biases also play a central role and an interplay between external perceptions and personal preconditions was proposed.

The last factor that was identified as a key influence on the decision-making of this choice is the approach that is taken to making this decision. Different approaches to arriving at the decision have emerged from the conversations with entrepreneurs and represent an essential influence on the decision. Particularly, some founders appeared to have made the decision of joining the program in a rather spontaneous way with a short time until arriving at the final decision, while others expressed a more long-term oriented decision process and this difference in decision-making approaches has shown an influence on the decision-making process. Furthermore, this finding has emphasized the relevance of the other two influencing factors on the decision that was made, due to the differences in approaches taken by entrepreneurs who eventually came to the same decision.

Finally, it was hypothesized that there are dynamic relations between the three key influencing factors on the decision making and in addition, a typology of the different types of accelerator joiners according to their level of experience prior to entering the program showed how the main differences in the nature of prior experience separates accelerator joiners from one another and how this influences the way in which the decision is made and what factors flow into the decision-making process.

5.2.2. Contribution

i) Academic contributions

The findings of this study are able to offer a multitude of theoretical contributions, as several research gaps were identified and posed as motivation to commence with this research investigation.

First, looking at the state of existing research studies, it appears that until today there is still a lack of knowledge and clarity around startup accelerators and their distinction to incubators (Hausberg & Korreck, 2020). Because of this, the objective of this study and the respective results offer a contribution to the comprehension around startup accelerators by investigating the topic and making use of a set of criteria for the accelerator programs included in the sample. This leads to added knowledge around startup accelerators in a way that is clearly delineable to other types of programs that also fall under the umbrella term of 'incubation models' (Pauwels et al., 2016) and therefore further clarifies the dissociation between the two concepts.

Second, the existing research on startup accelerators has investigated the topic from rather similar perspectives. A majority of studies has especially thematized the efficiency of accelerators and their ability to actually accelerate startups and increase their performance (Cohen et al., 2019). This study adds to the research on startup accelerators in the sense that it provides a new perspective, particularly that of the entrepreneur who is deciding whether to join the program or not. Until now a lack of understanding existed about what this thought process looks like for the entrepreneur and what factors play a specifically important role in their decision-making. This study explored these key influencing factors in the decision-making process and linked them back to entrepreneurship literature, where different decision-making factors have been studied previously in different contexts (Shepherd et al., 2015). Therefore, the established model of influencing factors and the resulting grounded theory model add valuable knowledge about a cross-stage entrepreneurial decision-making context.

This leads to the further contributions in the area of entrepreneurial decision-making literature that this study provides. In the literature review by Shepherd et al. (2015), existing studies on entrepreneurial decision-making have been categorized into clusters along the entrepreneurial venture creation process (opportunity recognition and assessment, market-entry, resource assembly and opportunity exploitation, launch, and exit (Peters et al., 2004; Shepherd et al., 2015)). However, this study provides a new and more holistic investigation of an entrepreneurial decision-making context, as the context of deciding to join an accelerator can be applicable to entrepreneurs in different stages of their process. This is due to the differences in development stages of startups within one accelerator cohort, as accelerator programs do not necessarily limit the participation in their programs to one specific stage where a startup must be at, at the time of participation. At the same time, the aggregate dimensions which make up the grounded theory model established during this study were able to be related back to some existing contexts of entrepreneurial decision-making, such as the context of

opportunity exploitation decisions, characteristics of the entrepreneurial decision-maker, the context of entrepreneurial entry decisions, heuristics and biases of the entrepreneurial decision-maker, and the context of opportunity evaluation decision-factors (Shepherd et al., 2015). Therefore it can be said that this study further adds to the knowledge about entrepreneurial decision-making in the aforementioned research areas by investigating a phenomenon that can be related to all of the contexts mentioned above.

Furthermore, the findings of this study were able to include in-depth perspectives of entrepreneurs and their first-hand experiences and thoughts, which facilitated the development of a novel grounded theory model. In the literature review by Shepherd et al. (2015), many studies on entrepreneurial decision-making were included, which have made use of general decision-making concepts (such as risk and uncertainty, moral behaviour, overconfidence and cognition) and applied them to the context of entrepreneurial decisions. In contrast to that, this study made use of a qualitative, inductive approach that aimed to be somewhat ignorant to existing theories and thereby facilitate the emergence of new knowledge (Gioia et al., 2013), instead of trying to apply existing theories to a new phenomenon.

Moreover, the typology of accelerator joiners proposed in *section 5.1.3.* identified three different types of entrepreneurs who took the decision to join an accelerator program. The typology underlines the influence of the different forms of prior experience, which seems to be shaping the decision-making process, as well as the motives and desired outcomes of the decision. Therefore, the typology adds to the research on entrepreneurial decision-making by further shedding light on how the differences in decision-making arise from individual entrepreneurs' different characteristics. Explaining and typecasting this heterogeneity also adds to the understanding around the variety in thought processes of entrepreneurs and offers an implication for the reason behind different outcomes of the same decisions. The typology therefore offers a starting point for further entrepreneurial decision-making research, that aims to explain reasons behind differences in entrepreneurial decision-making.

Lastly, a series of propositions in regards to the decision-making of entrepreneurs, as well as influencing factors on the decision-making, and the relationship between these factors was established during the process of developing the grounded theory model and can be summarized and generalized as follows:

1) *Prior personal and business-related experiences affect the entrepreneur's attitudes and mindset and thereby influence the approach to making the decision, such as the long-term or short-term orientation during decision-making.*
2) *The way in which the decision-making is approached more spontaneously or diligently influences the subsequent nature of opportunity exploitation and thereby determines the value that is extracted from the opportunity. A positive relation between a shorter or more spontaneous decision-making approach and a less efficient subsequent opportunity exploitation (and vice versa) is proposed.*

3) *The decision-making approach influences the way in which external factors are taken into account during the decision-making process. It is proposed that a shorter, more spontaneous approach negatively affects the extent to which some external factors are considered in the decision-making and that long-term oriented decision-makers consider specific factors according to their long-term plans.*
4) *The perception of external factors influences the decision-making approach that is taken. It is proposed that the perception of more external risks leads to a longer, more diligent decision-making approach.*
5) *There exists an interrelation between prior personal and business-related experiences and the perception of external factors on decision-making. By affecting the entrepreneur's needs and attitudes, prior experiences are proposed to influence the perception and assessment of external factors. Vice versa, external circumstances surrounding the decision-making context influence the opportunity exploitation decision, which is also based on prior experiences resulting in specific needs.*

ii) Practical contributions

Aside from the academic contributions mentioned above, this study also offers several contributions for the practical world, specifically players in the entrepreneurial ecosystem. In general, it can be said that the rise in availability and popularity of startup accelerators makes the phenomenon not only increasingly interesting for entrepreneurship research, but also practically speaking, several stakeholders can benefit from continued research on this type of program.

For instance, as mentioned earlier in this paper, there still exists confusion about the difference between the various entrepreneurship support programs, such as incubators and accelerators. This is even the case for entrepreneurs themselves, as many of them do not know the difference between these programs, what they could expect out of them, and which one would be the most suitable for them and their startup. By investigating startup accelerators specifically, and using a homogenous set of criteria for their definition in the sample, the insights from this study offer additional knowledge on startup accelerators specifically and the thought process of entrepreneurs who chose to join them. This could for example offer valuable insights for entrepreneurs who are trying to make the same decision or want to learn more about the concept of these programs.

Furthermore, especially accelerator founders and managers could benefit from the insights into the perspective of entrepreneurs included in this study. This is especially the case for accelerator managers who would like to comprehend in how far they could adapt their programs to increase satisfaction and acquire more participants. During the course of the interviews with accelerator graduates, many of them expressed their disappointment in some design aspects of current accelerator programs (also described in *Section 4.2.2.*). This led to the establishment of a list of suggestions for

program improvement based on this study. Although these suggestions only stem from a small number of entrepreneurs who have graduated from accelerator programs, there might still be value in these points of critique:

a) Fit between startups, mentors and investors

Several graduates expressed how they felt the mentors in the accelerator programs were not fit to give them advice on their product or businesses as they sometimes would be industry-outsiders or not very committed to helping the founders. Therefore, the graduates suggested accelerators invest more time into finding appropriate mentors for each startup. This could be done i.e. by an extensive startup-mentor matchmaking phase before or during the program. Another founder even suggested a new model of mentorship, where the mentor would personally benefit from the success of their mentees, e.g. by receiving a percentage equity stake in the startup for a longer period of time and in return mentor the startup for a specified amount of time per month. Therefore the mentor would have more incentive to help the startup in a long-term deal.

Furthermore, not only the mentors within the programs were criticized, but the founders also felt that the investors (which were also facilitated by the accelerator program) often did not understand their product as they were not experienced in the respective industry, which led to a difficulty for the founders to acquire funding during the accelerator program. Therefore it was criticized that not only the accelerator program needs to be industry-specific in order to be valuable for the startups, but also the investors within the program.

Circling back to the typology of accelerator joiners, the developed categorization offers further implications for the improvement of graduates' satisfaction, as the typology illustrates how different types of joiners have different needs and prerequisites that led them to have different expectations from the participation in the program. As three different types of accelerator joiners were identified, a need for different types of accelerator programs that are tailored to these different types of founders seems legitimate. For example, an accelerator could offer the entrepreneurs three different programs (or tracks within one program), according to whether they have prior startup experience, industry experience, or both. Thereby the programs would be more tailored to the specificities of the founders and their startups by offering them the right mentors, industry contacts and session contents, which would increase their satisfaction and help them achieve their goals in a more efficient way.

b) Equity deal between accelerator and startup

As mentioned in the findings of this study, there appeared to be considerably different attitudes towards the required equity deals by the accelerator programs. Those who did not agree with these terms either avoided accelerator programs which they perceived as exploitative, or entered the

program anyway but ended up being dissatisfied with the deal that they agreed to. One suggestion to solve this discrepancy is a milestone-based equity deal, where the startups would create a milestone plan with the program at the beginning, and the accelerator would then receive their equity percentages based on the achieved milestones. This would align the incentives of the accelerator program and founders and decrease the exploitation of startups within accelerator programs. Thus, to attract even the entrepreneurs who shy away from accelerators due to these equity agreements, accelerator programs should rethink the way in which they set up their reward models.

c) Suggestions for the program contents

As many entrepreneurs joined accelerators in order to learn specific entrepreneurial skills for their startup development, some were dissatisfied by what they were taught during the program. For instance, some founders felt that the accelerator should not only teach them about the basics of starting a company but should also teach founders the right mindset and focus on their passion since a narrow focus on acquiring funding might lead to disappointments during the journey of creating the startup and hinder a problem-solving mindset which would be needed during times of complications. Furthermore, several entrepreneurs scrutinized the programs in terms of their ability to help them in the practical sense as they perceived the contents of the program as too theoretical. Particularly, some founders desired less theoretical assignments and instead wished for more help with tasks such as finding industry contacts, acquiring customers and market research, since they perceived this to be a more valuable use of their time in the program. Therefore, accelerator managers should try to balance the theoretical and practical aspects of their programs in order to deliver more value and assistance to the startups.

5.3. Limitations of the study and further research

This study aimed to explore a previously uncharted aspect of entrepreneurship research by investigating the phenomenon of startup accelerators from the point of view of entrepreneurs who joined them and understand key factors that influenced their decision-making of doing so. While the study produced a multitude of valuable theoretical and practical contributions, some limitations also occurred during this study.

First, as the goal was to achieve an in-depth understanding of the phenomenon, it was planned to conduct some initial conversations with accelerator managers before proceeding to the data collection stage, which included in-depth interviews with entrepreneurs. The reason behind this was to gain profound knowledge about the processes within accelerator programs first, before talking to

entrepreneurs about their perspectives. A number of accelerator managers were therefore contacted, in order to hold these initial conversations, however this did not yield any responses. Therefore, this step had to be omitted, however, this was compensated by conducting extensive desk research about accelerator programs and gaining a sufficient knowledge-base before proceeding to conduct interviews with entrepreneurs.

Second, in the data collection and sample, the inclusion of entrepreneurs who decided against joining an accelerator program was planned, with the goal of gaining more significant and meaningful results and also include factors that led to a choice against this decision. To recruit this segment of the sample, interviewees were asked to recommend founders from their entrepreneurial network, who considered joining an accelerator as well, but ended up not doing so. Additionally, the researcher of this study used her network on the platform LinkedIn, in order to share a post which aimed at recruiting this target group. However, despite the efforts to recruit this type of entrepreneurs, no connections were able to be established. The difficulty of recruitment was high, as this type of interview participants could not be identified without knowing them and they would have had to make themselves apparent. In an attempt to make up for this deficiency in the sample, the entrepreneurs in the sample who did join accelerators were asked what made them decide against joining another accelerator program subsequently at a later stage or another startup. While this does not replace the value of the other groups' insights, it still offers a perspective on what factors had an opposing effect in the decision making and which aspects of the entrepreneurs' experience during accelerator programs made them decide against joining another one later on.

Lastly, as explained in *chapter 3,* the Gioia method was used for the data analysis of this study. The authors of the method suggested using 'member checks' during the process of coding and interpreting the data, in order to increase the credibility and trustworthiness of the results (Gioia et al., 2013). However, due to the nature of this graduation assignment, which has to be achieved independently and without external help, it was not possible to co-work with another individual on the coding and interpretations of the data. Therefore, the interpretations are solely based on the researcher's effort to develop a structure and a grounded theory model out of the data. This should therefore be taken into account by the reader and future research that might take this study as a reference.

These limitations lead to some suggestions for future research studies in this area. Within the contributions of this study, a grounded model of the influencing factors on the decision-making of entrepreneurs was developed (see *Figure 7*). Furthermore, a series of propositions as to the dynamic relationship between the three emergent dimensions of key influences on entrepreneurial decision-making was also established. Further research studies could offer interesting contributions by testing the model and the propositions of this study. For instance, a quantitative study that investigates the relations suggested in the five propositions (see section 5.1.2.) could complement the findings of this study by verifying the hypothesized dynamics of entrepreneurial decision-making influences. Also, the typology that was proposed in *section 5.1.3.* could be tested with a larger sample and even

investigated within a quantitative study, in order to verify the proposed types of accelerator joiners. Finally, future research in the area of entrepreneurship could take specific factors which were identified as decision-making influences on entrepreneurs within this study and quantitatively test their influence on entrepreneurial decision-making. This would be possible for several aspects mentioned in the Second-order themes. One good example of intriguing future research building on this study would be to investigate i.e. whether spontaneous or planned entrepreneurial decisions lead to differences in the extent to which a decision is satisfactory or if it was 'right' for the benefit of the business to make this decision. This would shed light on the influence of different decision-making approaches and their effect on entrepreneurial success.

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7. Appendix

Appendix A: Interview guide example

Guide Nr. 3
09.08.

1. Introduction round
2. Thank them for participating
3. State research goal
4. Information about anonymity of the data: The audio recordings will be transcribed, anonymised and aggregated. The results will be processed within the scope of a study at the University of Twente. The recordings will be deleted after the completion of the study.
5. Confirm that the consent form was filled out
6. Any Questions?

---------- Start recording ----------

7. Can you shortly tell me about the startup that you entered the accelerator with?
8. **Block 1: Process**
    a. When and how did you first get to know about the accelerator?
    b. At what point in the founding process did you first think about joining an accelerator?
    c. Would you say it was planned to join an accelerator all along? If yes, how and why?
    d. What was your situation beforehand in terms of an existing network or resources for the business?
    e. What alternatives did you consider to the accelerator?
        i. Was there an accelerator where you thought about joining, but did not?
    f. Did you enter several accelerators? If yes, why? If not, why not?
    g. What was the first thing you thought about when you were thinking about applying? What's the first thing you considered?
        i. What downsides to joining an accelerator did you think of?
        ii. What were the pros and cons that you thought about?
9. **Block 2: Experiences**
    a. Before joining the accelerator, did you know someone who had already joined one?
    b. Before applying, did you already have knowledge/ experiences in the industry? In starting a business? (How many years..?)
    c. What would be your vision for the ideal accelerator program?
10. **Block 3: Attitudes**
    a. What was your attitude towards debt vs. equity funding & did this affect your choice to join the accelerator?
    b. What aspects were especially important to you during the time where you tried to develop your venture?
        i. What benefits were you after, what did you need?
    c. What main risks did you perceive in regards to your startup at the time before joining (risk of industry, firm risk?)
    d. Did you perceive any risks to the idea of joining an accelerator program?

11. **Block 6: Learning**
    a. What outcome did you hope for when you joined the accelerator?
    b. At the time, how did you perceive the competition in the market?
        i. Did you perceive any pressure to enter the market/ launch soon?

---------- End recording ----------

12. If you would like a summary of the results let me know and I will send you an overview of the results
13. Ask about contacts to other possible interviewees
    a. Entrepreneurs who also joined
    b. Entrepreneurs you know who have considered joining an accelerator but then decided against it

Appendix B: Additional quotes supporting interpretations of the data analysis

Themes	Aggregate Dimension 1: Role of prior personal and business experiences
Gaining a network, funding, and/or learning as reasons to join	➢ "We worked pretty much with them together. We had some peer to peer kind of review stuff. We were working in the same office or coworking space, I guess. And we were always communicating with them. And these startups were all from all across from Europe, the globe, really from Georgia, Portugal, Netherlands., etc. And yeah, that was really, really cool as well, to see other startups, their ideas and kind of learning from them." ➢ "Hope to raise money. I mean the whole goal of joining Founders Factory was to raise money." ➢ "We learn something on how to pitch to investors, because the only reason why we join this is that 80 percent guarantee and understand what investors are looking for and to pitch to the investors." ➢ "they were helping with even the Milan connections, like my companies registered in Italy. So for me, that these connections that I was missing, you know, like, I don't know, chartered accountant or just normal consultancy on the legal and financial fiscal side admin things that, you know, you if you're an entrepreneur, these are the things that really take a lot of time from you. And having these guys here, especially being Italians, they were a great help." ➢ "I'm really good at going out to loads and loads of events and talking to people. But translating those networks into actual business opportunities is something that I wasn't really good at." ➢ "My expectation was, enlargement of the network, like opening some doors to the startup scene."
Joining an accelerator to advance the startup	➢ "And this is also what they say, you can test your idea without wasting years of time for example." ➢ "But they also had other parts of the team that were helping us with simple things like setting up our infrastructure." ➢ "So one of the things I realized is that, you know, starting up a company, there's so many things that you need to think about. I mean, there's basic logistics, like registering the company in your local jurisdiction, you know, but then also trying to develop your pitch, your business strategy, your business plan, your financial projections, your marketing strategy, your sales plan." ➢ "Also we learn something on how to pitch to investors, because the only reason why we join this is that 80 percent guarantee and understanding what investors are looking for and to pitch to the investors." ➢ "But we were still trying to figure out how to monetize. So we had a couple of different ideas that we were still testing. So we still have plenty of questions that we thought joining a program would be able to help us with." ➢ "I think the accelerator program, in contrast, actually speeds up the development process, speeds up the marketing process. It speeds up everything really well."

Personal facilitating factors for joining	➢ "I just think I wasn't necessarily happy with all the juggling of work and doing everything at once, and so I was kind of a way to to make a big change in a way that was kind of positive or like it was almost it gave me a good reason to make all these changes in my life that I needed to make because things aren't really working as they were." ➢ "I felt that I miss structure, I found it incredibly difficult on my own to build a structure." ➢ "Well it's my network, so the director of the Founder Institute is a friend of mine and he's been doing it for forever. And I was very curious about the accelerator." ➢ "After a few years following that first startup, as I started to learn more about how startups are built and and how other people do it, then I became very fond of start ups, and that's when I started following things like Y Combinator and I definitely wanted the experience of an accelerator at some point in my career." ➢ "And one of the main expectations was also like them leading me with a lot of pressure, with a lot of expectations, but still they would just take me by the hand and lead me through this founding process, like you know, how to do it correctly in order to to come up with with a scalable business. And that is exactly what they did." ➢ "If you're in a relationship that's going to be supportive and if you're an entrepreneur, you need to have a partner who is supportive of you working ridiculous number of hours. And if you don't have that, it's better to end it sooner rather than drag it on for ages, in a way." ➢ "And, you know, you meet, you talk and you have workshops and et cetera. That's a good thing because you don't feel that you're not kind of special, like you don't feel that you're the only one struggling with the issues. And you think only for you it's very hard to raise investment, but then it's ninety nine percent of the hundred also have the same. So that's kind of flattering. Also sharing experience and networks and connections."
Criteria for the right program	➢ "So it needs to have got a wider reach. So because there are very localized accelerators in Germany but only if you want to explore the German market." ➢ "Because I came from abroad and I was there for seven years, I had lost a lot of network connections, understanding information about the national regulatory bodies, how it works. And I thought if I jumped into those kinds of accelerator programs, they're going to help me a lot in developing my organization." ➢ "Why particularly F-lane? Was because the new use case that we wanted to do with drones was to try to solve the problem of infant malnutrition, child migration, and by delivering by delivering nutrition packs to to remote areas and also breath kits for, a lot of babies and dying in rural areas due to lack of proper care, which could be solved by providing the health officers with the right resources, right? Yeah. So we thought, OK, this problem we're solving involves both mothers and babies and this accelerator is looking for people that are using the technology to empower women, right, so I think we are at the intersection of what they're doing." ➢ "Third, I would say language wise it needs to be an accelerator, that

	doesn't require me to pitch in German because my German was much worse than now." ➢ "I was looking for accelerators that had sort of backing from the financial services industry."
Variety in prerequisites, stages and attitudes of the startups and founders	➢ "My network personally is very large, to be honest" ➢ "So we already had the pilot mapped out and the partners onboarded and we already had our own funding to cover that, which my co-founder had provided." ➢ "I wouldn't say we had much of a network, so for context, when we came up with this idea, my co-founder and I, we were both based in New Zealand. So we didn't really have a network in Australia at the time. And we didn't really have a network in New Zealand of investors or entrepreneurs or anything like that, because our previous startup we had we had done everything alone. So this was a new world for us." ➢ "I guess in regards to the skills, we were pretty confident, but we need some financial support." ➢ "And I was speaking to people from my cohort only this week. And we have a lot of people drop out because they are against this equity. But they also help you to get to the point where you can have equity worth taking."

Themes	**Aggregate Dimension 2: Influences from the perception of external factors**
Concerns and risks perceived before joining	➢ "And me and my co-founder, we were working actively on a full time job and that was also an issue. And back then we gave up our jobs in January for this year. So that shouldn't have been done, let's put it that way." ➢ "It's because I had some contracts that already were signed up. I had the consulting job, like I was consulting small businesses in marketing and market entering and so on, so I couldn't just drop it. I couldn't say they'll wait. So I had to combine it all and to balance it all. And like, you know, no free days, no weekend stuff like very, very concentrated, busy time." ➢ "So time was the biggest factor that scared me. 14 weeks afterwards, what is going to happen? What if we don't get investments? Yeah, and of course that was the downside." ➢ "You're never sure of the quality of these workshops, right. So that was a gamble sort of situation." ➢ "The main risk actually was like, I mean, will we be able to absorb all the assets or all the information or their experience you know with our little team? Because we were at that time three people or four people even."
Reasons against joining again; critique and disappointments in the program	➢ "I would definitely help companies to get in touch with different companies who could be their potential customers. Yeah, this never happened with either programs I know, and Founder Institute is the worst to be honest. We had to find our own customers, we had to do our own research. So we had to do everything on our own. We took so much time and these theoretical assignments. This was like the most time

	consuming part. And I would rather invest my time in practical things than theoretical things." ➢ "And then they take you to the Paris Air Show, which is really a show for big planes and aviation companies and military companies and stuff. Yeah. And like, what are we doing here? You know, you know, I was totally out of touch. So I think that was kind of like, OK, no more accelerators." ➢ "We wanted to be fair only if we get a chance to pitch in front of investors. Yeah. Because at the end of the day, why did we join this cohort or why did we pay that thousand dollars for this Founder's Institute if you are not getting an opportunity to get investment? So none of us signed that four percent and we got 15 harassing emails from the legal department." ➢ "So I spent a lot of that and I finally stopped doing it because, you know, while it was nice and it made me feel warm and fuzzy, it does not serve the needs of my business." ➢ "I found that the connections provided by the accelerator's did not benefit the business directly, very rarely did they really have an overlap there."
External influencing/ facilitating factors	➢ "So I think it is seven percent. They take equity. That's not what, we didn't do that, and we negotiated a different rate." ➢ "Someone from the recruitment team connected with me on LinkedIn and asked me to apply because they said that we fit the kind of thesis that they had for the kind of startups that they wanted to work with." ➢ "And also they also offered to take care of us. We didn't have to pay anything. They also gave us a little bit of money that I ended up using in my business. So that was encouraging for me that this is a huge opportunity. I don't have to spend anything on it." ➢ "We did quite a lot of due diligence and we reached out to some people who reached out to the network and said, if anyone knew anyone who'd gone to Founders Factory? And we spoke to about five or six different companies." ➢ "The advertisements and how they were communicating what whoever takes part in it will achieve out of it, all those kind of communications actually made an impact on me because I was feeling the need for learning more and the limitations that I had were advertised on those posts as well." ➢ "And I think because we had a comparison to make against Blue Chile, the previous accelerator we were accepted into, there were just a number of general things that just felt more right about this one. They were more willing to listen to what we wanted. They were more willing to negotiate on things if we weren't completely happy, whereas the previous accelerator felt very much one way, where either their way or no way. And so just that general way in which they communicated and organised the whole thing was very well done."

Themes	Aggregate Dimension 3: Approach to making the decision
Discussions and considerations before joining	➢ "I didn't even know these kind of things existed because there my university was the support model for me. Right. So if I thought I lacked any kind of information, I would just contact my university, my professors, and then, yeah, whoever was there." ➢ "So from then on the debate was, do we do Y Combinator or do we do something in Europe? And where do we get all the funding from, what kind of funding strategy do we have? Because if you go the US route, you'll end up with much higher valuations. You expected to go much, much faster perhaps than you. You might try and do things too early, too quickly, and then run out of time. And you kind of close yourself off to European investors who are prepared to pay the high valuations once you go to the US." ➢ "It was a common consent. First, I wanted to join by myself. And after knowing about this, my co-founder also wanted to join me." ➢ "So and I discussed with them, this is what is happening and then talk to them if this is the right path. Because there were stakes involved. And so they said if it helps, then why not? So the second validation process was from the advisory committee, I would have to say." ➢ "Us amongst founders, would also share that one percent and one percent goes back to the team where the HQ was. So I felt that was a very, very fair system. So I didn't hesitate to put that as a plus, even though we had to give up equity, whereas other startups were getting money with no equity." ➢ "But for the early a startup we had a convertible loan of 100k euros and we had it for six percent of the company and yeah, back at that stage, that was insane. That was a really, really good deal. Even though like 20k of those are actual actual money, the other, 80K, are services that we are provided with, whatever it still was a good deal." ➢ "We joined because there was no cost. And, you know, I only saw a benefit. I didn't see any downside to it."
Short or spontaneous decision process	➢ "The concept was completely new to me as well. So I didn't know what an incubation program or an acceleration program was. Yeah, it was completely new for me, so I was not searching for it in any way." ➢ "We were starting to think about it maybe a few months earlier. And then we signed up and sent in our request on the accelerator, and then we were chosen by three thousand others." ➢ "And yeah, but it wasn't like we chose it or we had pre planned it, like we should apply for F-lane. It was just timing." ➢ "I think we did a very, very quick decision because Google didn't yield much result for the accelerator. Like I said back then, it was not as many options as today." ➢ "So the technology was still in development. So yeah, maybe, applying for this was very, let's say spontaneous and I would call it maybe opportunistic." ➢ "And yeah, but it wasn't like we chose it or we had pre planned it, like we should apply for F-lane. It was just timing." ➢ "Because we didn't have anything to compare with, we just compared it to what we were getting out of it."

Seeing long term benefits and long term fondness of accelerators	➢ “I'll give a third one, which is investor network for subsequent rounds.” ➢ “So, accelerator, I learned a lot about all this debt and equity ratio, the acceleration program. But then I applied those learnings in my own startup.” ➢ “I mean the experience was so great, lifetime alumni community. It's all the benefits that you get. It's kind of becoming a part of some bigger community which is actually rapidly expanding.” ➢ “Yeah, of course. Yeah. I guess it gives you a lot of confidence after you kind of complete this whole process with the accelerator. Then for your next venture to of course, be like, OK, I think I have all the basics now.” ➢ “Where the first time round I kind of felt like we were just floating through the program and we didn't really know how to make the most of that time. So now if I was to go into another accelerator, one I would know the things to look for, like I already feel comfortable and being able to identify which type of accelerator I would want to go into depending on the business.” ➢ “Well we are always tempted, right. But also accelerators take a lot of time. We did apply for a few more.” ➢ So obviously later on, I did recommend it to a lot of my friends, people in my circles, because ever since then I've always been an ambassador for F-lane.” ➢ “So I did one masters and then another one and then I started law as well. So for me, just study. Doing something in itself and getting some sort of qualification is something that I enjoy doing.”

Appendix C: Background data used for typology development

			Experience		Approach		Perception of ext. factors (risks/ concerns)	Resources needed from accelerator		
	Interviewee nr.	Industry/ Product type	Startup experienc	Industry experienc	Short-term orientation	Long-term orientation		Funding	Network	Knowledge
Type 1: SE + IE	6	VR platform	yes	yes		x	low	yes	no	no
	7	Drone delivery	yes	yes		x	low	yes	yes	no
	8	Education/ tech	yes	yes		x	low - medium	no	no	yes
Type 2: SE, no IE	2	Health care	yes	no	x		low	yes	yes	yes
	9	Pet food	yes	no	x		low	yes	yes	yes
	11	Energy tech	yes	no		x	medium	no	yes	yes
	15	Eyewear	yes	no			medium	yes	yes	yes
Type 3: no SE, IE	18	Education/ tech	no	no		x	low	no	yes	yes
	3	AI software for supply chains	no	yes		x	medium	yes	yes	no
	4	Education/ tech	no	yes		x	medium	no	yes	yes
	5	AI software for design	no	yes		x	medium	yes	yes	no
	10	Finance/ tech	no	yes		x	medium	yes	yes	yes
	12	Fashion/ tech	no	yes	x		low - medium	yes	no	no
	14	Gaming platform	no	yes	x		medium	yes	no	yes
	16	Agriculture/ Supply chain	no	yes	x		low - medium	yes	no	yes
	17	Education	no	yes	x		low	no	no	yes
	1	Software service	no	yes	x		low - medium	yes	no	yes
	13	Education/ tech	no	no	x		low - medium	yes	no	yes